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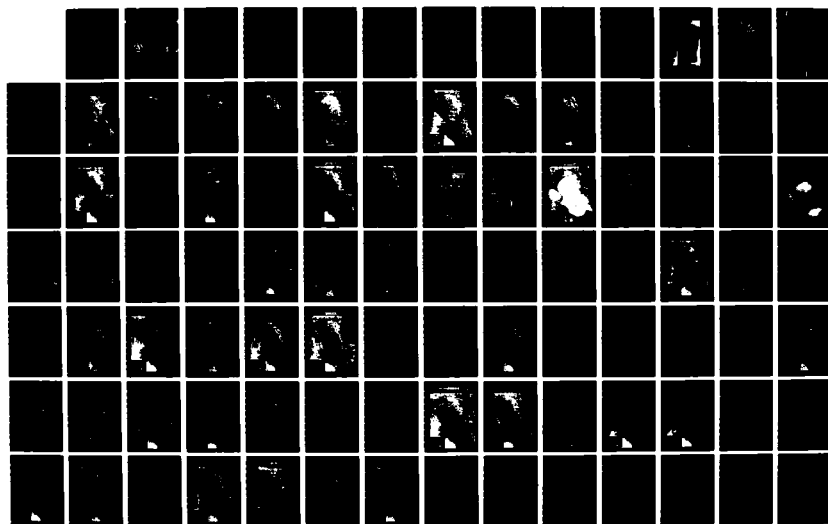
CLIMATOLOGICAL ATLAS FOR IRAQ(U) AIR FORCE
ENVIRONMENTAL TECHNICAL APPLICATIONS CENTER SCOTT AFB
IL APR 85 USAFETAC/DS-85/011

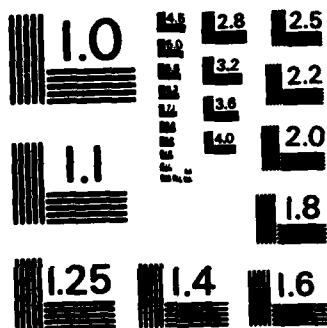
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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USAFETAC/DS-85/011

AD-A159 703



CLIMATOLOGICAL ATLAS

FOR

IRAQ



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APRIL 1985

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UNITED STATES AIR FORCE
AIR WEATHER SERVICE (MAC)
USAF
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TECHNICAL APPLICATIONS
CENTER

SCOTT AIR FORCE BASE, ILLINOIS 62225

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PREFACE

This data summary is a reprint of the Climatological Atlas of Iraq, Publication No. 13, as prepared by the Republic of Iraq Meteorological Department (Climatological Section), Ministry of Communications, Directorate General of Civil Aviation. It has been reprinted in response to numerous requests from Air Weather Service staff weather officers. The only known copy of the original document (printed in color) is archived at the Air Weather Service Technical Library (AWSTL), Scott AFB, IL 62225-5008.

Although the original document is not dated, the latest period of record for most climatological data is 1956. The earliest period of record begins with 1923, but most record periods begin in the mid-1930's. The Atlas was entered in the USAF Environmental Technical Center's library holdings in 1962. Despite its age, it is, to the knowledge of the Air Weather Service Technical Library staff, the most recent climatological document available for the Republic of Iraq.

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PREFACE

The project of publishing a Climatological Atlas for Iraq was under study since 1940.

Difficulties during wartime have prevented the publication of the Atlas. So in 1945 the Atlas was published under D.F. Booth Senior Met. Officer Baghdad Airport.

In the meantime all the copies of that Atlas have been distributed and many requests could not be satisfied.

Instead of reprinting the mentioned Atlas it has been decided to issue a completely new edition, using the Climatological Values up-to-date adding a number of new graphs following recommendations of WMO.

The datas used for the graphs are going to be published in detail in a special publication. The lack of the former Atlas due to inhomogenity of most of the observations and short-term informations could not be avoided completely in this issue, of courses, because the same datas have been used. But the fact, those datas at least 12 years more were available reduced the statistical error considerably, and it can be assumed, that the presented Atlas gives a quite accurate picture of the normal weather - conditions in Iraq.

ACKNOWLEDGEMENT

The Atlas has been prepared by the Climatological Section of the Meteorological Department at Baghdad-Airport under Sayid Naman Jamil Sultan. The elaborate calculations and the checking of all observations as well as all the copy work has been done by Sayid Andrawis Jamil Qashat, Farhan Abdul Karim Al Saad and Hanna Sadiq Shadda. The whole work was directed and supervised by Dr. Ernst Lingelbach.

My fullest Acknowledgement is tendered to all of them.

Towfiq Fattah
Director of Met. Department
Baghdad - Airport
IRAQ

Geographical Datas and

Period of records for the different observations used for the preparation of this Atlas

Precipitation, Temperature, Pressure, Humidity, Cloudiness,

Thunderstorm, Fog, Dust and Wind

Observed at	Latitude			Longitude			Height above MSL. in meters	Period
Mosul	36	19	N.	43	09	E.	222.6 m.	1923-1956
Kirkuk	35	28	N.	44	24	E.	330.8 m.	1935-1956
Khanaqin	34	18	N.	45	26	E.	201.2 m.	1936-1956
Baghdad	33	20	N.	44	24	E.	34.1 m.	1937-1956
Habbaniya	33	22	N.	43	34	E.	43.6 m.	1935-1956
Rutba	33	02	N.	40	17	E.	615.5 m.	1928-1956
Hai	32	10	N.	46	03	E.	14.9 m.	1940-1956
Diwaniya	31	59	N.	44	59	E.	20.4 m.	1939-1956
Nasiriya	31	01	N.	46	14	E.	3.0 m.	1940-1956
Basra	30	34	N.	47	47	E.	2.4 m.	1937-1956

Precipitation only

Observed at	Latitude			Longitude			Height above MSL. in meters	Period
Zakho	37	08	N.	42	41	E.	442 m.	1935-1956
Amadia	37	05	N.	43	30	E.	1236 m.	1935-1956
Rawanduz	36	37	N.	44	33	E.	1006 m.	1935-1956
Aqra	36	45	N.	43	58	E.	716 m.	1935-1956
Telawainat	36	41	N.	42	24	E.	346 m.	1938-1956
Sinjar	36	19	N.	41	50	E.	476 m.	1935-1956
Telaafar	36	22	N.	42	28	E.	273 m.	1939-1956
Qayara	35	48	N.	43	17	E.	180 m.	1938-1946
Arbil	36	11	N.	44	00	E.	414 m.	1935-1956
Chamchamal	35	32	N.	44	51	E.	701 m.	1939-1956
Sulaimaniya	35	33	N.	45	27	E.	853 m.	1935-1956
Penjawin	35	37	N.	45	58	E.	1311 m.	1939-1956
Bakrajo	35	34	N.	45	23	E.	750 m.	1936-1956
Halabja	35	11	N.	45	59	E.	724 m.	1935-1956
Iftikhar	35	03	N.	44	27	E.	204 m.	1935-1956
Chuarta	35	44	N.	45	33	E.	1356 m.	1942-1956
Salahddin	36	37	N.	44	13	E.	1088 m.	1940-1956
Rayat	36	41	N.	44	57	E.	2610 m.	1942-1956
Sanat	36	46	N.	42	48	E.	— m.	1944-1956
Duhok	36	52	N.	43	02	E.	860 m.	1943-1956
Mirzarustam	36	03	N.	44	58	E.	459 m.	1945-1956
Shaqlawia	36	23	N.	44	20	E.	— m.	1945-1956
Sirsank	36	58	N.	43	32	E.	1046 m.	1945-1956
Binkird	36	03	N.	45	03	E.	708 m.	1952-1956
Tuz	34	53	N.	44	39	E.	220 m.	1935-1956
Ana	34	28	N.	41	27	E.	— m.	1935-1956
Diala (Sedor)	34	05	N.	45	01	E.	68 m.	1943-1956
Jalawlaa	34	16	N.	45	09	E.	119 m.	1935-1956
Hit	33	38	N.	42	50	E.	58 m.	1952-1956
Karbala	32	37	N.	44	01	E.	29 m.	1935-1956

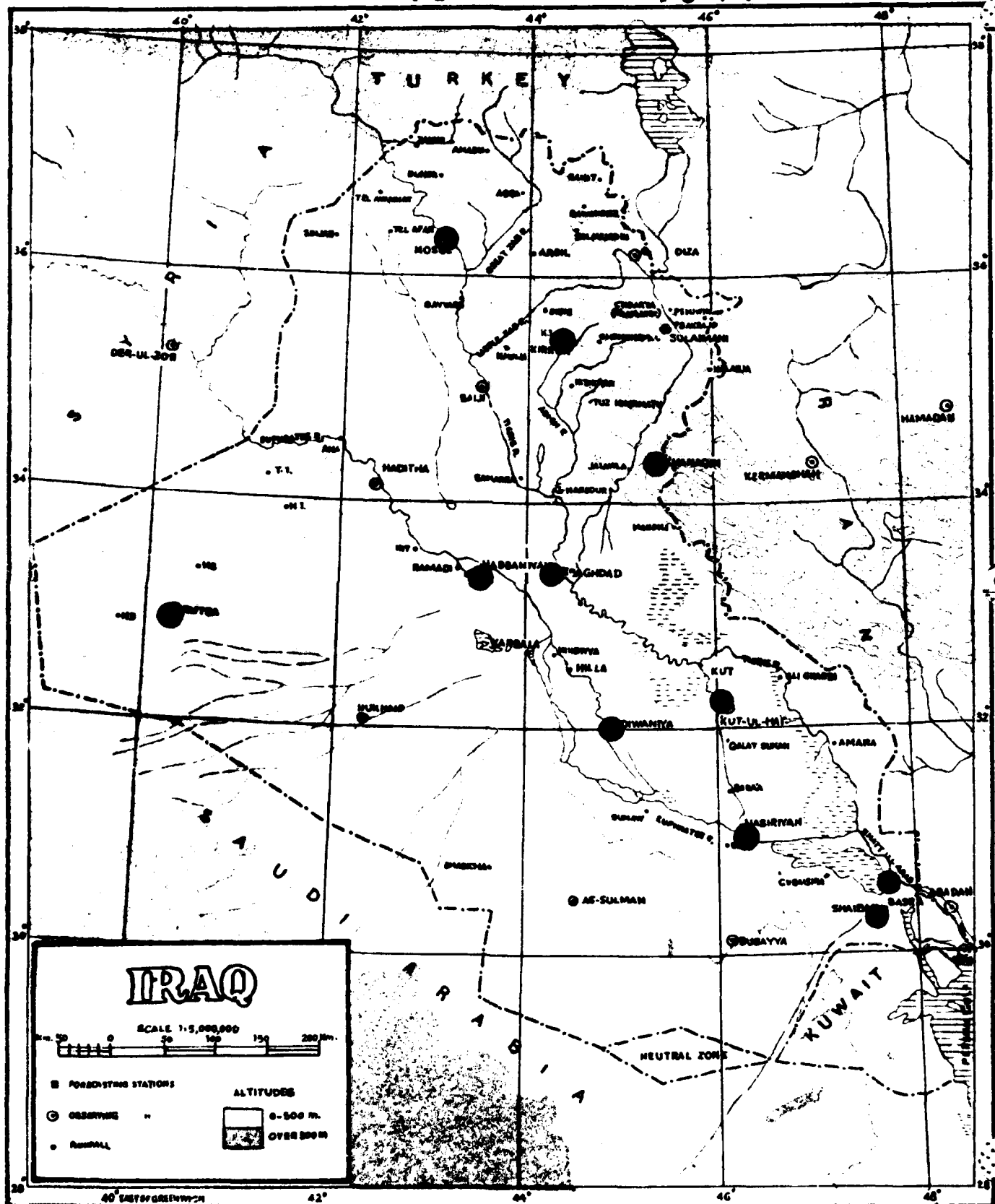
Observed at	Latitude			Longitude			Height above MSL in meters	Period
Hindiya	32	42	N.	44	17	E.	24 m.	1936-1956
Hilla	32	29	N.	44	26	E.	27 m.	1935-1956
Kut	32	30	N.	45	45	E.	19 m.	1935-1956
Mandily	33	45	N.	45	33	E.	137 m.	1935-1956
Nukhaib	32	02	N.	42	15	E.	305 m.	1935-1956
Amara	31	51	N.	47	10	E.	9 m.	1935-1956
Shabicha	30	42	N.	43	41	E.	— m.	1935-1956
Samawa	31	18	N.	45	16	E.	6 m.	1935-1956
Badaa	31	26	N.	46	11	E.	9 m.	1936-1956
Ur	30	58	N.	46	08	E.	4 m.	1935-1956
Ghabishiya	30	44	N.	47	05	E.	4 m.	1935-1956
Maqil	30	34	N.	47	47	E.	2 m.	1935-1956
Fao	29	59	N.	48	30	E.	2 m.	1935-1956
Bir Uglia	37	00	N.	42	13	E.	420 m.	1935-1940
Dibis	35	41	N.	44	05	E.	239 m.	1936-1946
Baiji	34	56	N.	43	29	E.	115 m.	1935-1944
Samirra	34	11	N.	43	50	E.	65 m.	1935-1951
Rumadi	33	25	N.	43	17	E.	48.7 m.	1923-1936
Haditha	34	04	N.	42	22	E.	140 m.	1934-1944
Hawijah	35	31	N.	44	18	E.	305 m.	1940-1956
T 1	34	13	N.	41	20	E.	318 m.	1936-1941
T 2	34	27	N.	40	10	E.	— m.	1936-1939
H 1	33	47	N.	41	28	E.	409 m.	1934-1944
H 2	33	21	N.	40	36	E.	593 m.	1934-1944
H 3	32	57	N.	39	45	E.	13 m. 778 m.	1934-1944
Qalat Sukar	31	52	N.	46	05	E.	13 m.	1934-1954
Ali al Gharbi	32	28	N.	46	41	E.	13 m.	1939-1947
Salman	30	28	N.	44	43	E.	202 m.	1935-1944
Bussaya	30	02	N.	46	09	E.	144 m.	1935-1944

MAP OF IRAQ

and

Main Observation Stations of the Iraqi Meteorological Department
(Rain Fall Stations see page 6, Period of Records page 2/3)

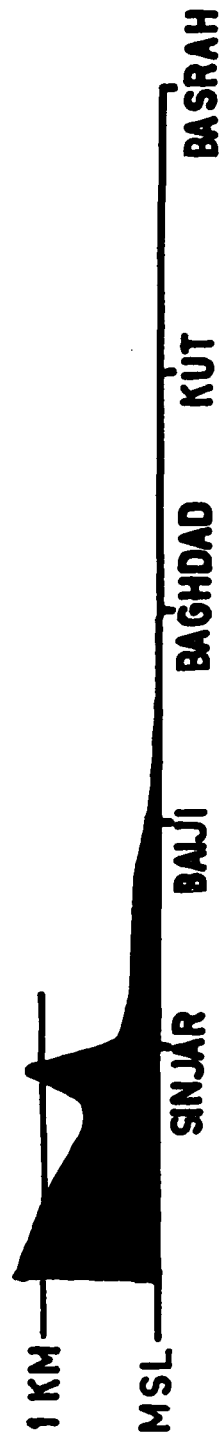
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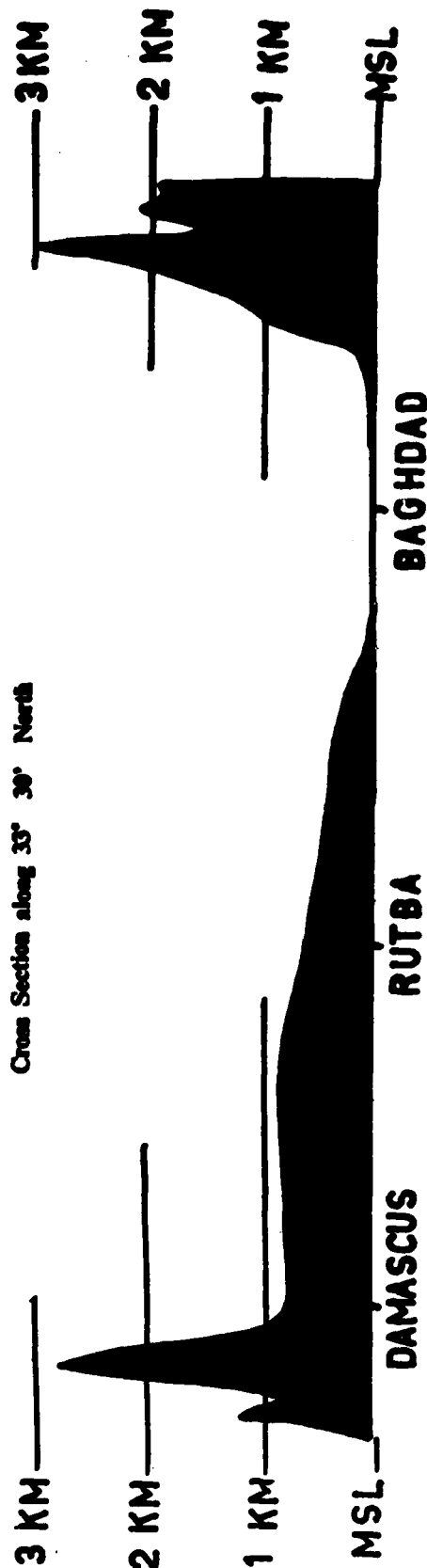
5

THE VALLEY OF EUPHRATES AND TIGRIS

Cross Section along line
Sajer-Baghdad-Basrah



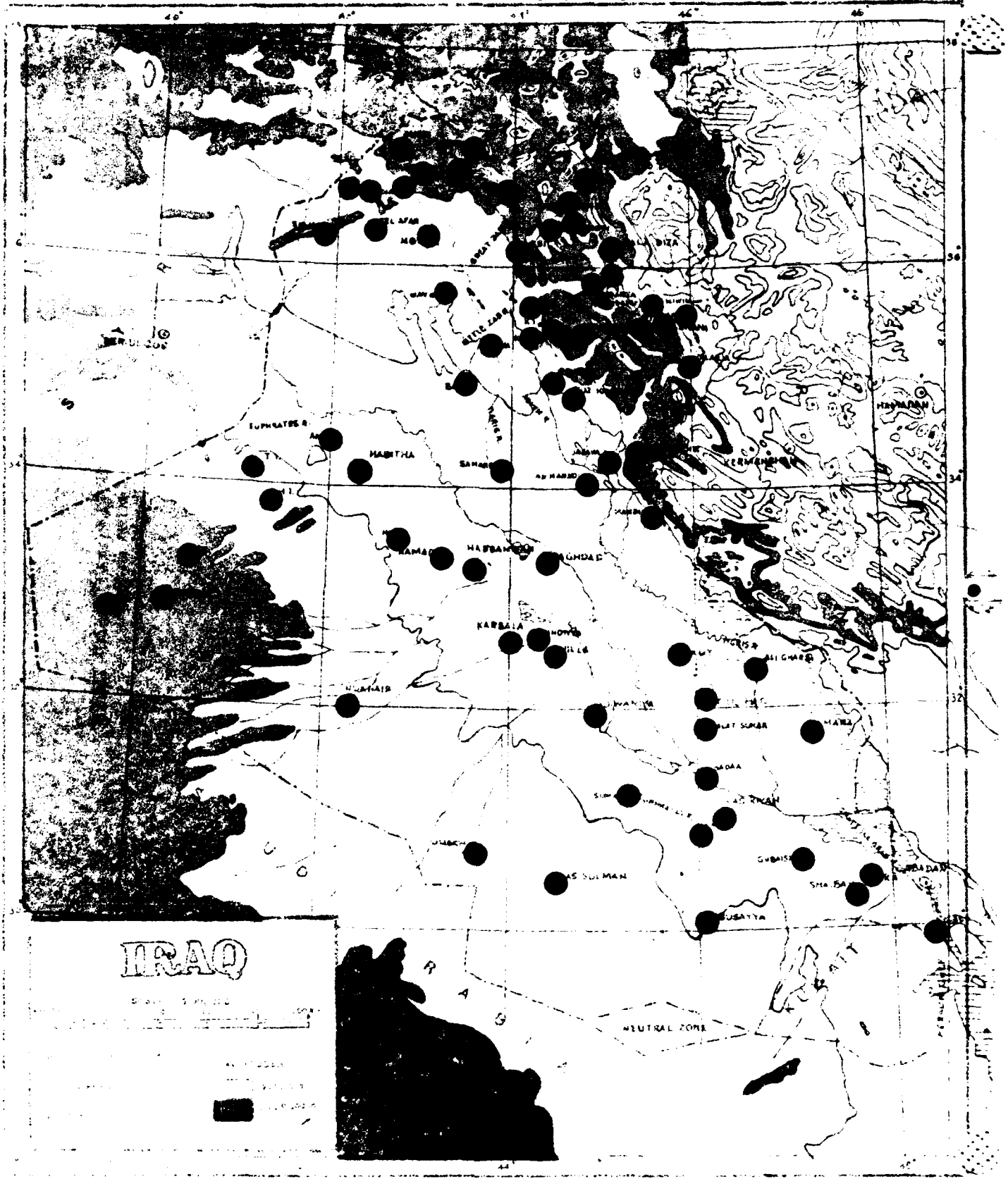
Cross Section along 33° 30' North



PRECIPITATION

Location of Rain—Gauges
See notes: Period of Records

6



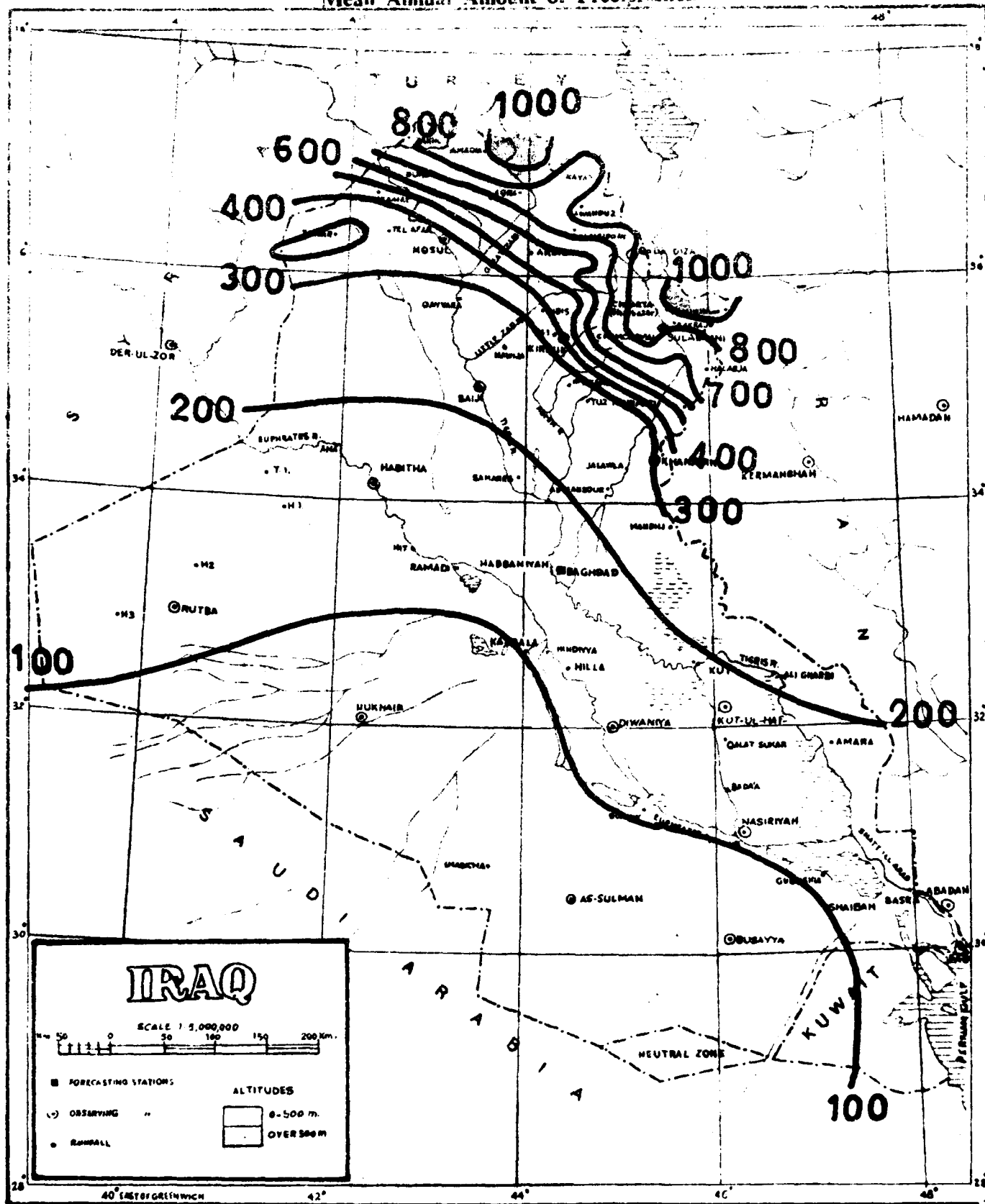


ANNUAL PRECIPITATION

7

PRECIPITATION Mean Annual Amount of Precipitation

3

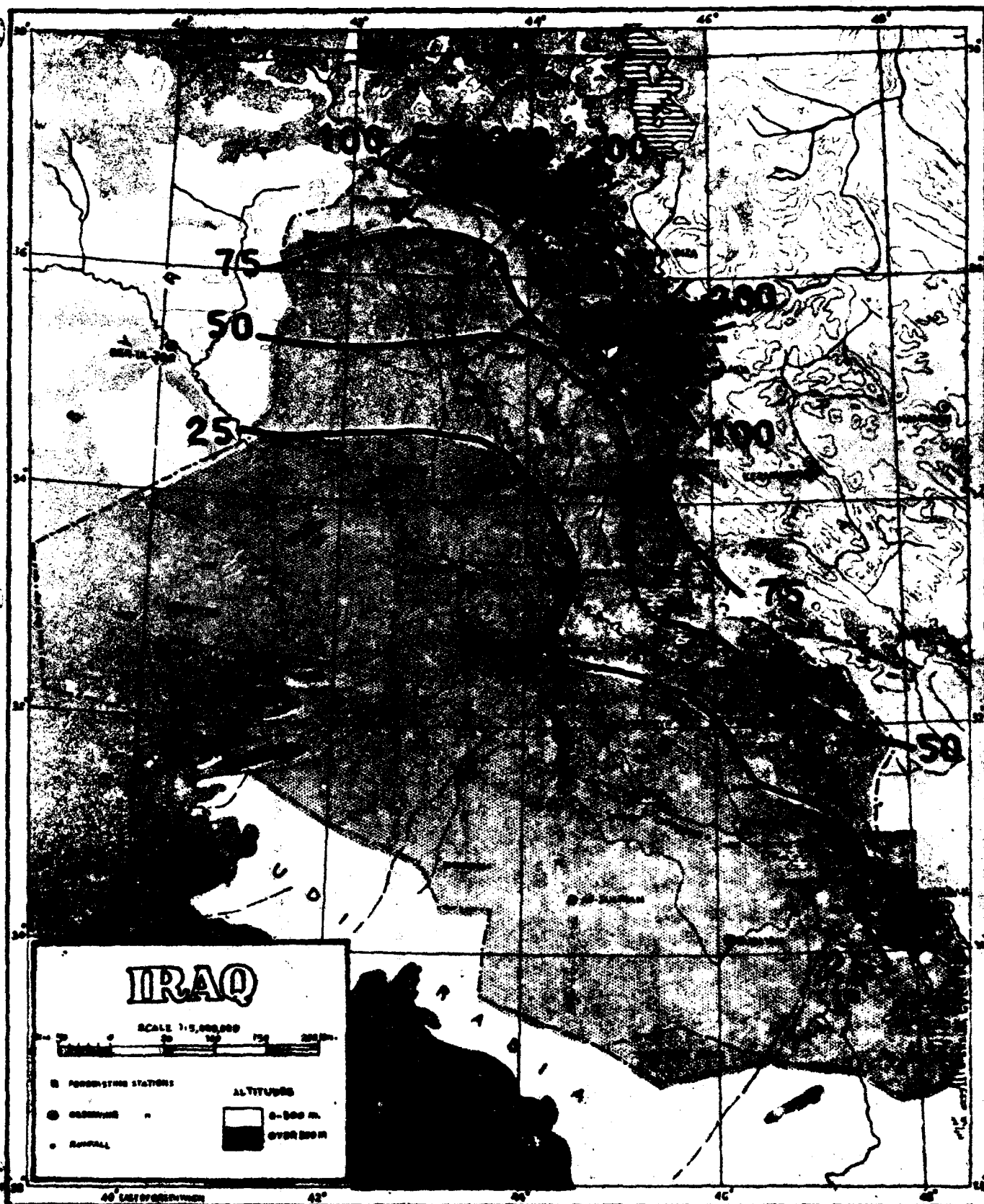


PRECIPITATION

Mean Monthly Amount of Precipitation

9

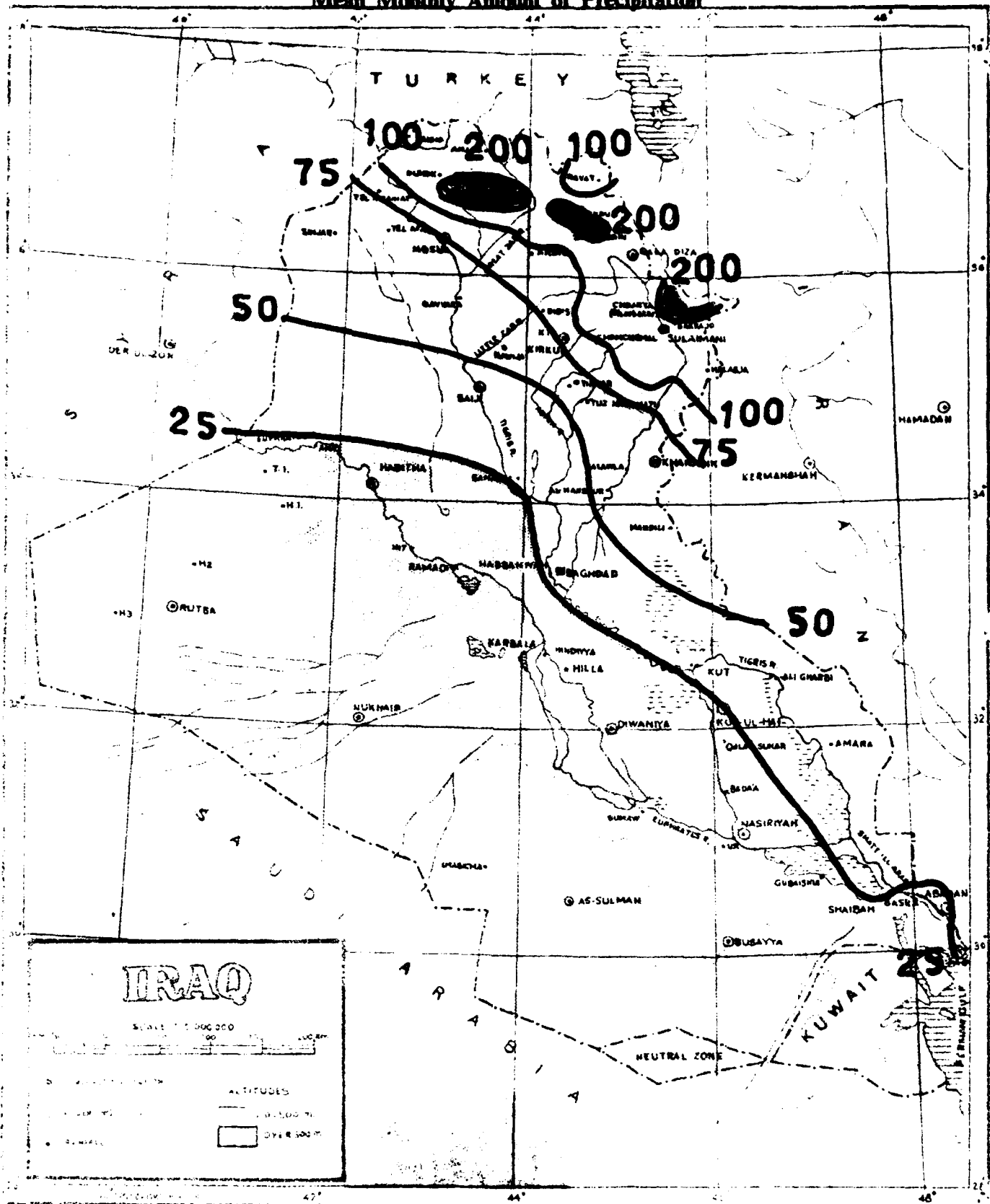
JANUARY



SURVEY PRESS. BAGHDAD

PRECIPITATION Mean Monthly Amount of Precipitation

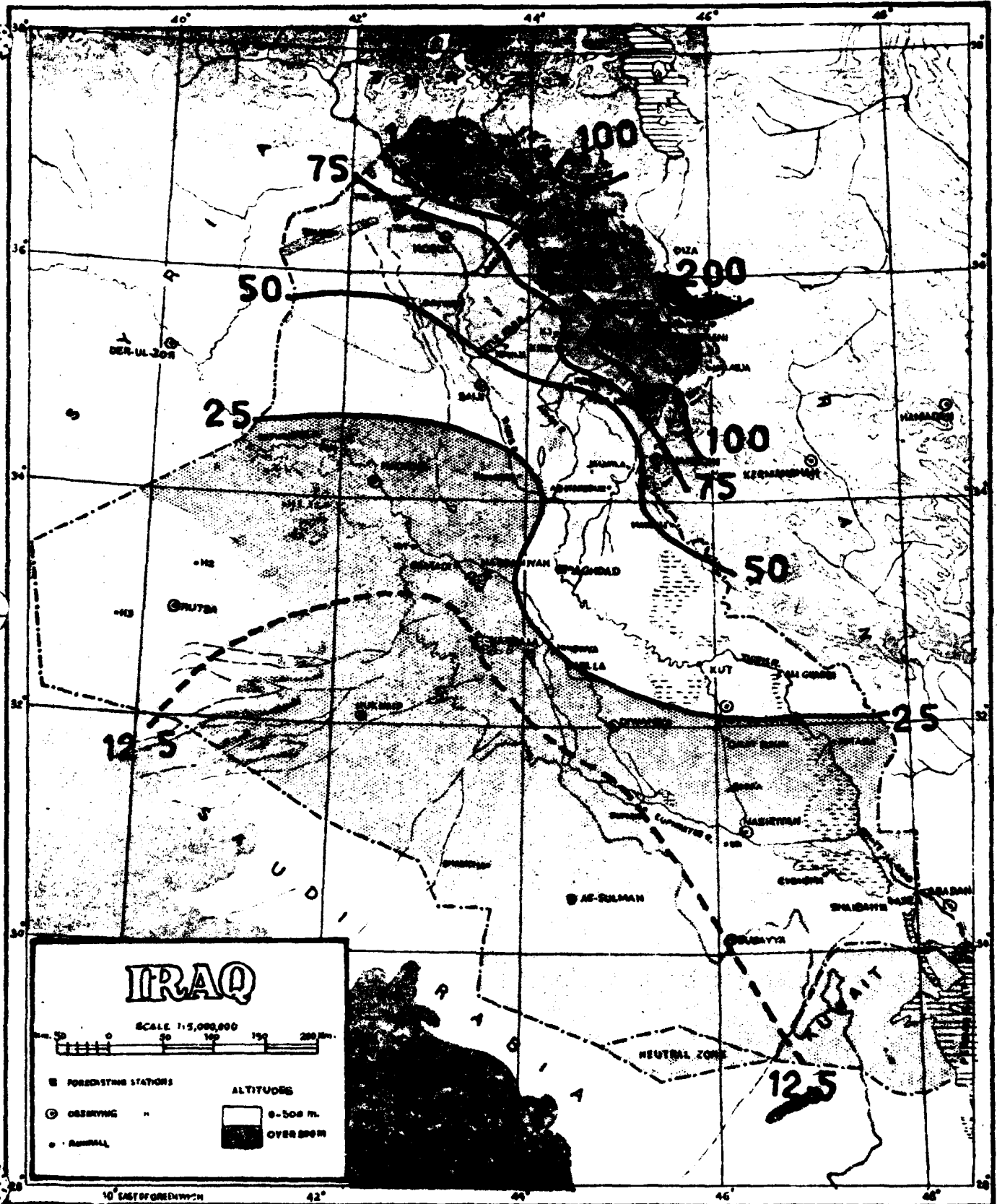
10
FEBRUARY



PRECIPITATION Mean Monthly Amount of Precipitation

11

MARCH

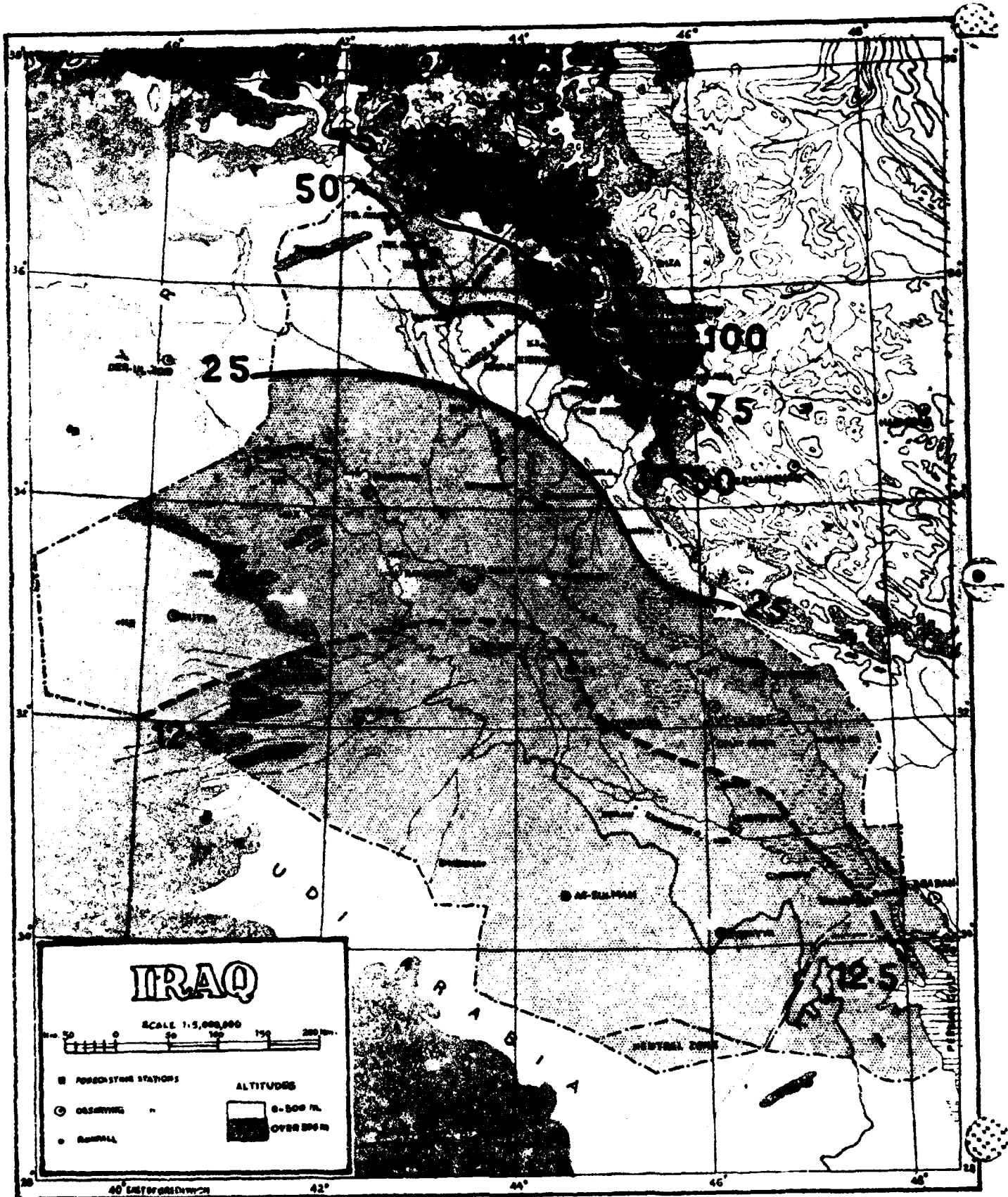


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PRECIPITATION Mean Monthly Amount of Precipitation

12

APRIL

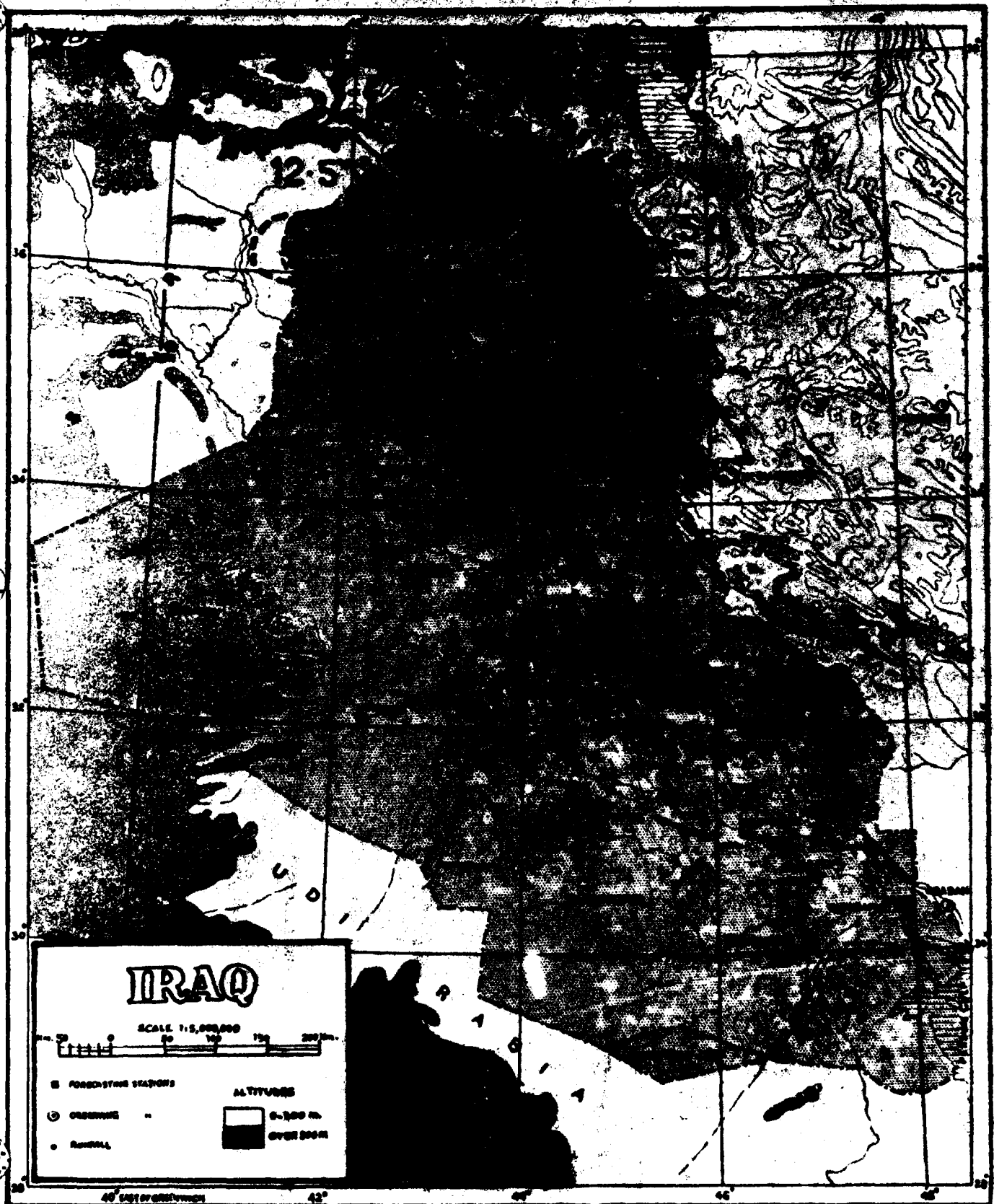


SURVEY PRESS, BAGHDAD.

PRECIPITATION

13

MAY



IRAQ

SCALE 1:5,000,000

FORECASTING STATIONS

○ OBSERVING

● RAINFALL

ALTITUDES



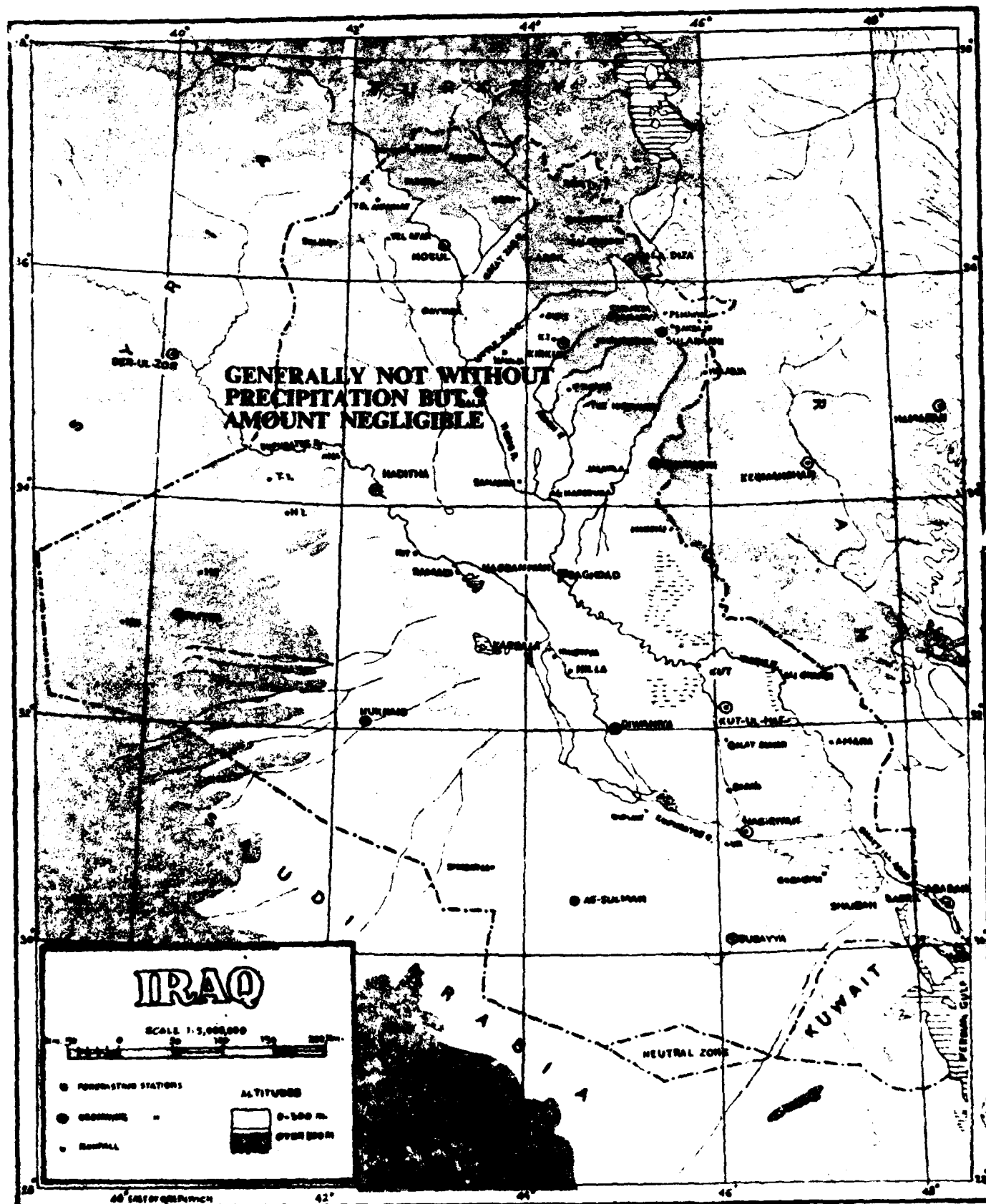
0-500 m
OVER 500 m

SURVEY PAGES. BAGHDAD

PRECIPITATION

Mean Monthly Amount of Precipitation

JUNE
JULY
AUGUST
SEPTEMBER



SURVEY PRESS BAHNDAQ

PRECIPITATION

Mean Monthly Amount of Precipitation

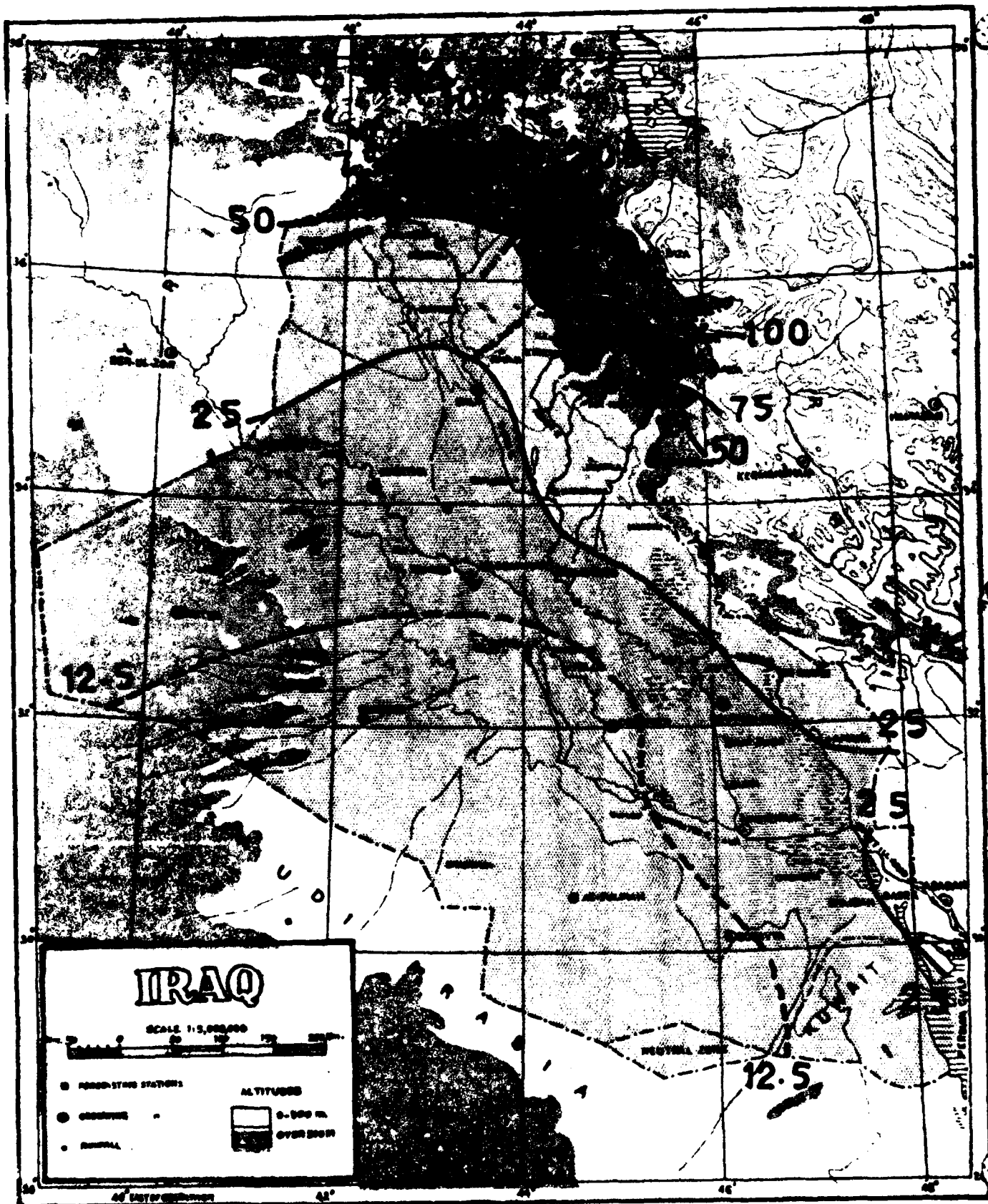
OCTOBER



PRECIPITATION Mean Monthly Amount of Precipitation

16

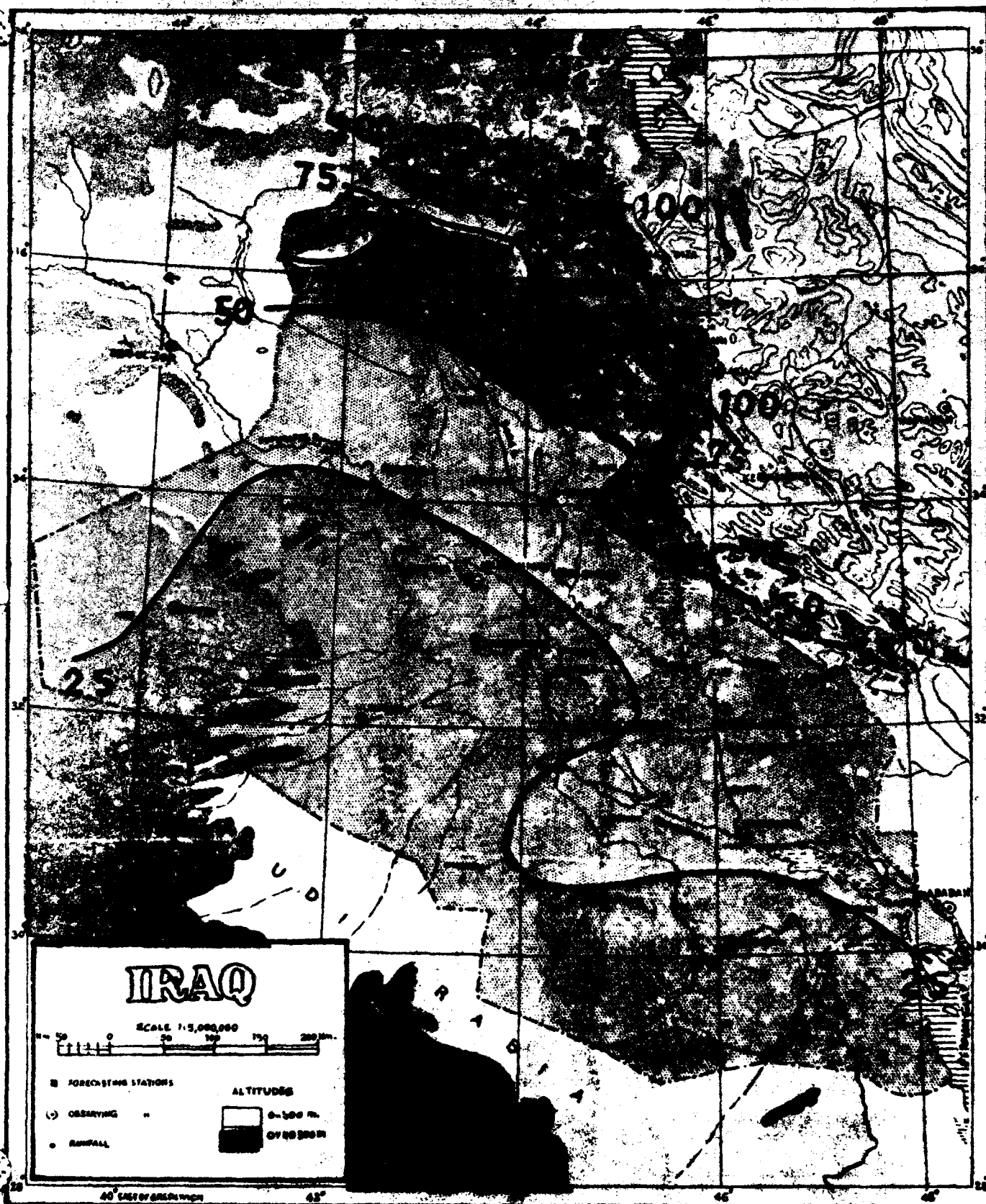
NOVEMBER



PRECIPITATION Mean Monthly Amount of Precipitation

17

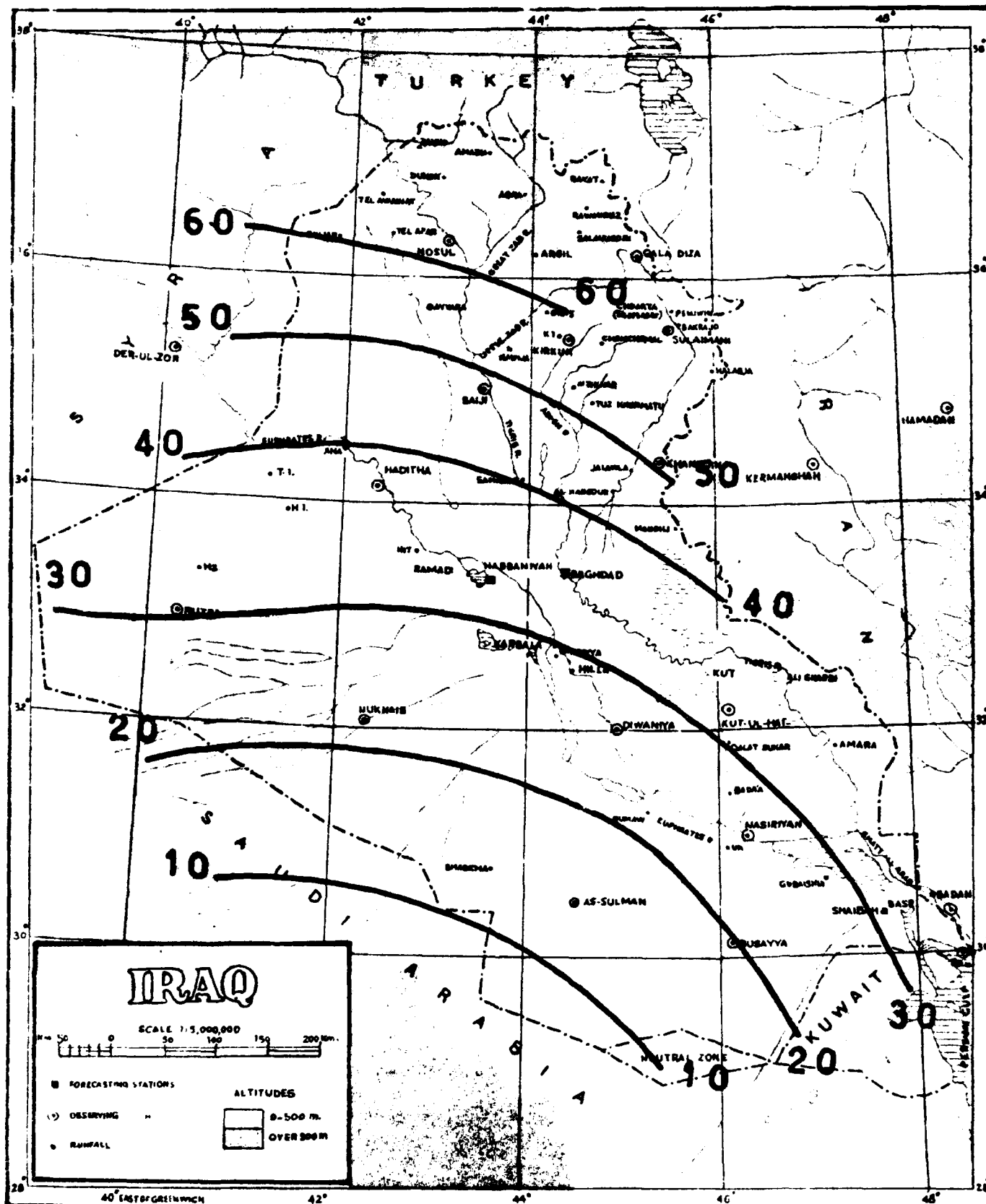
DECEMBER



PRECIPITATION

Mean Annual Number of Days with Rain
Period of records see page 2/3

18

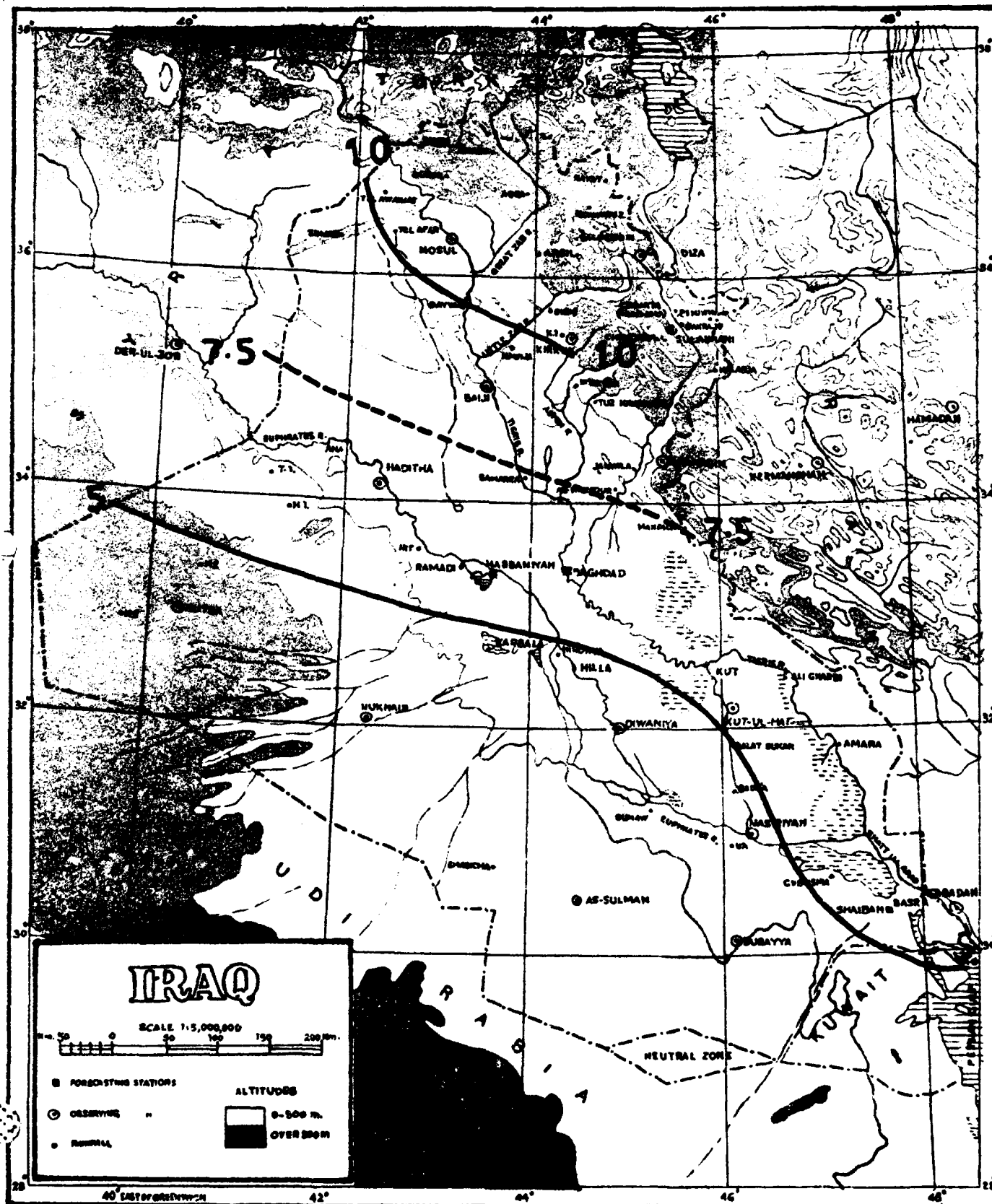


PRECIPITATION

Mean Monthly Number of Days with Rain
Period of records see page 2/3

19

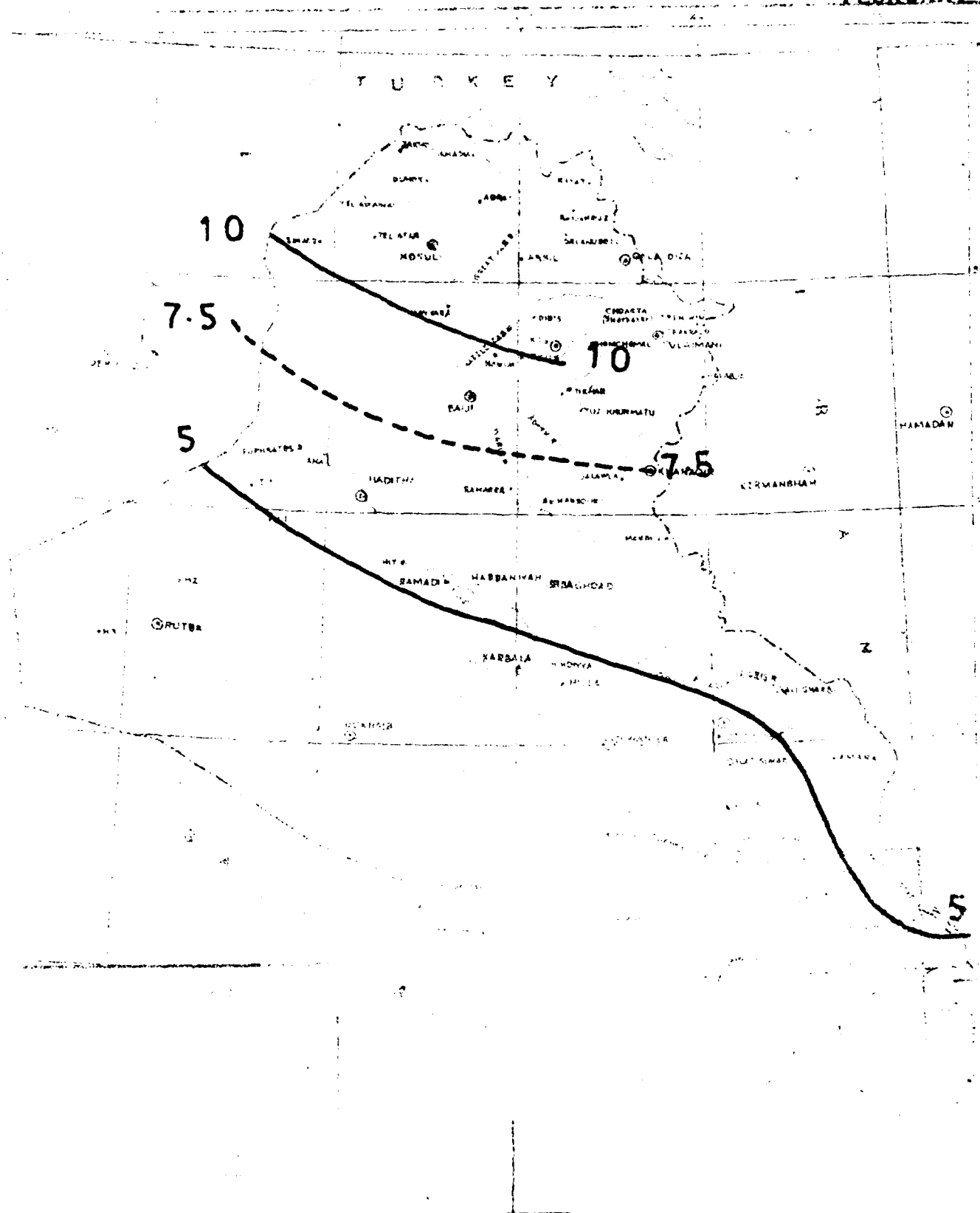
JANUARY



PRECIPITATION
Mean Monthly Number of Days with Rain
Period of records see page 2/3

20

FEBRUARY

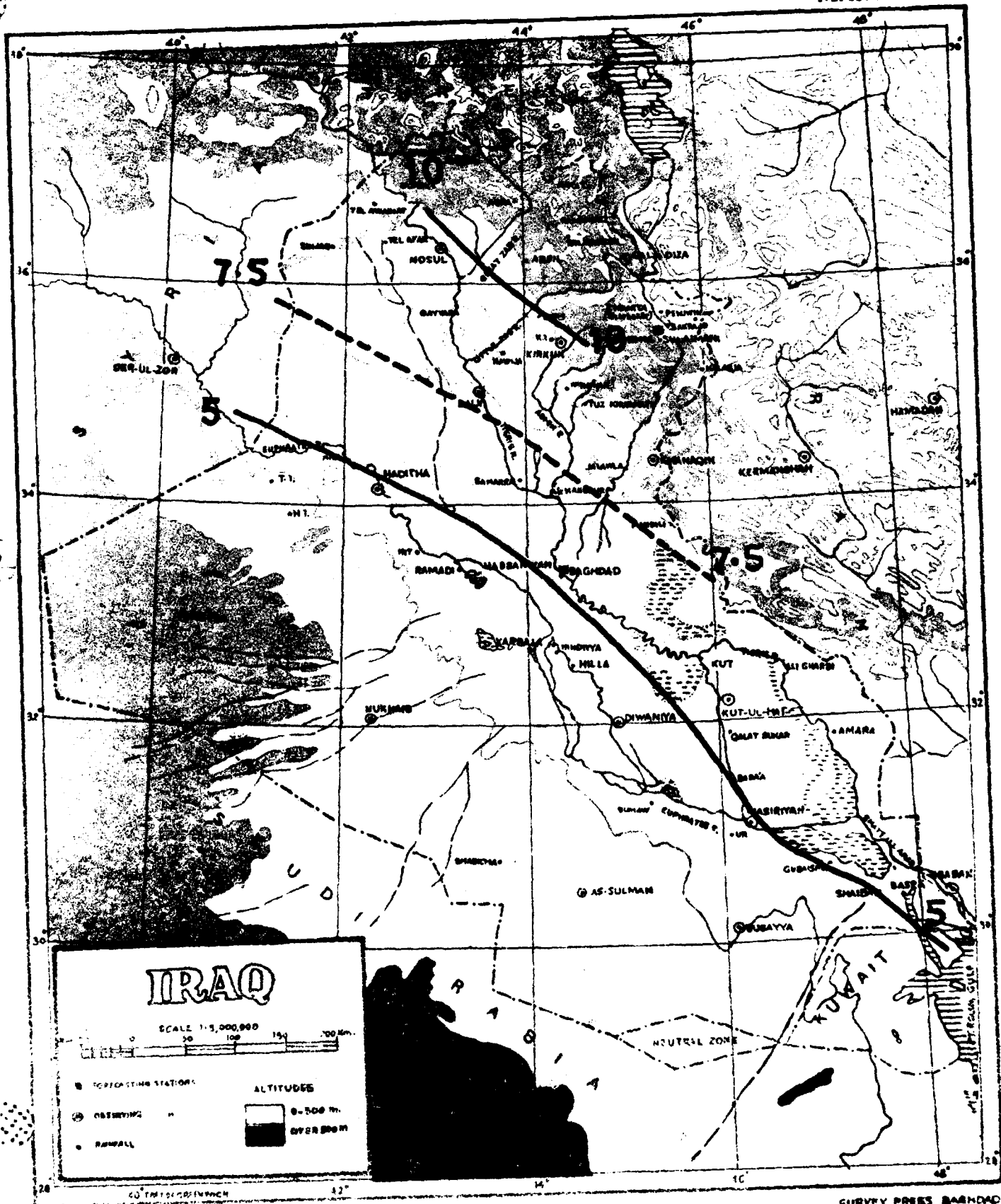


PRECIPITATION

Mean Monthly Number of Days with Rain
Period of records see page 2/3

21

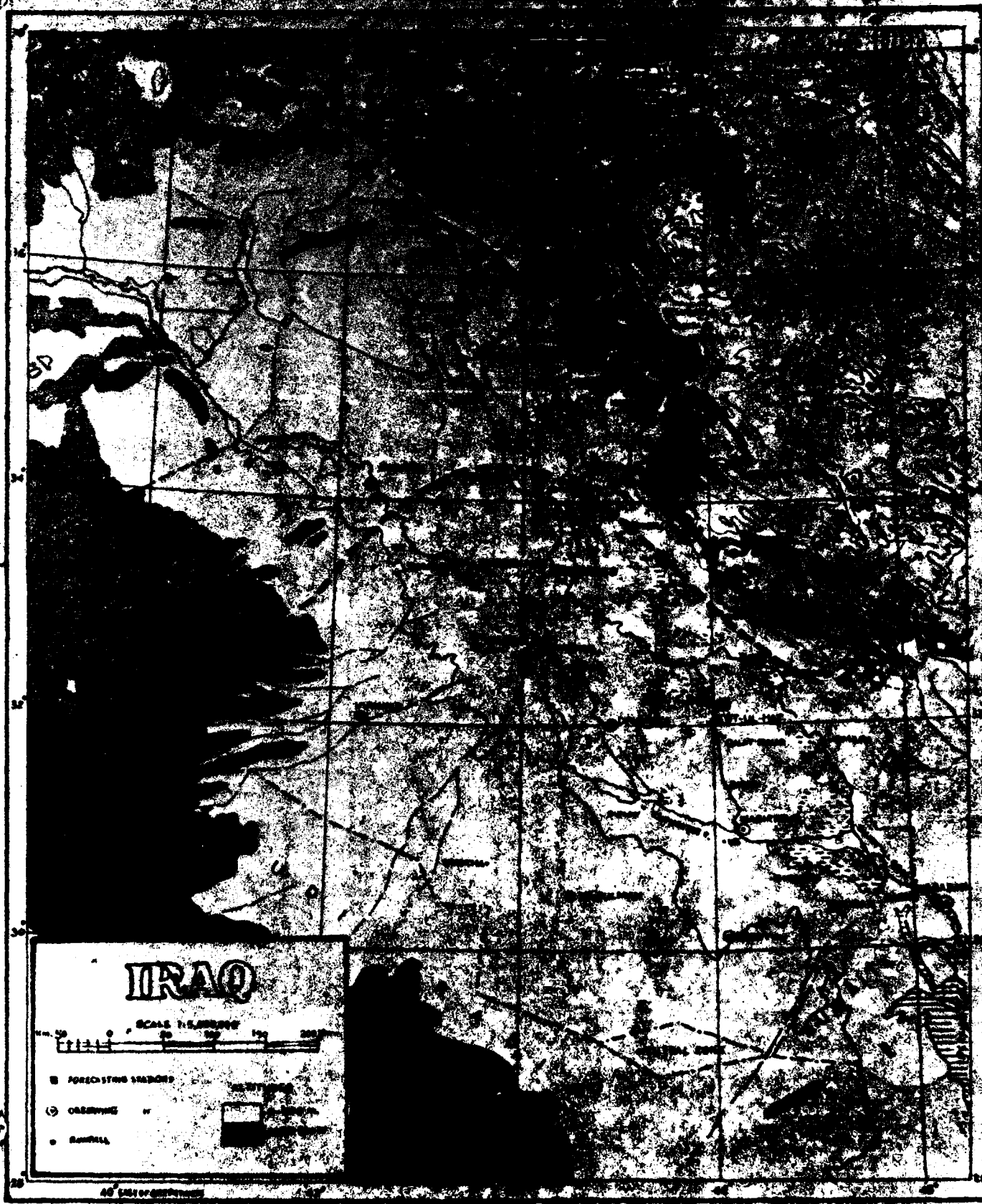
MARCH



22
APRIL

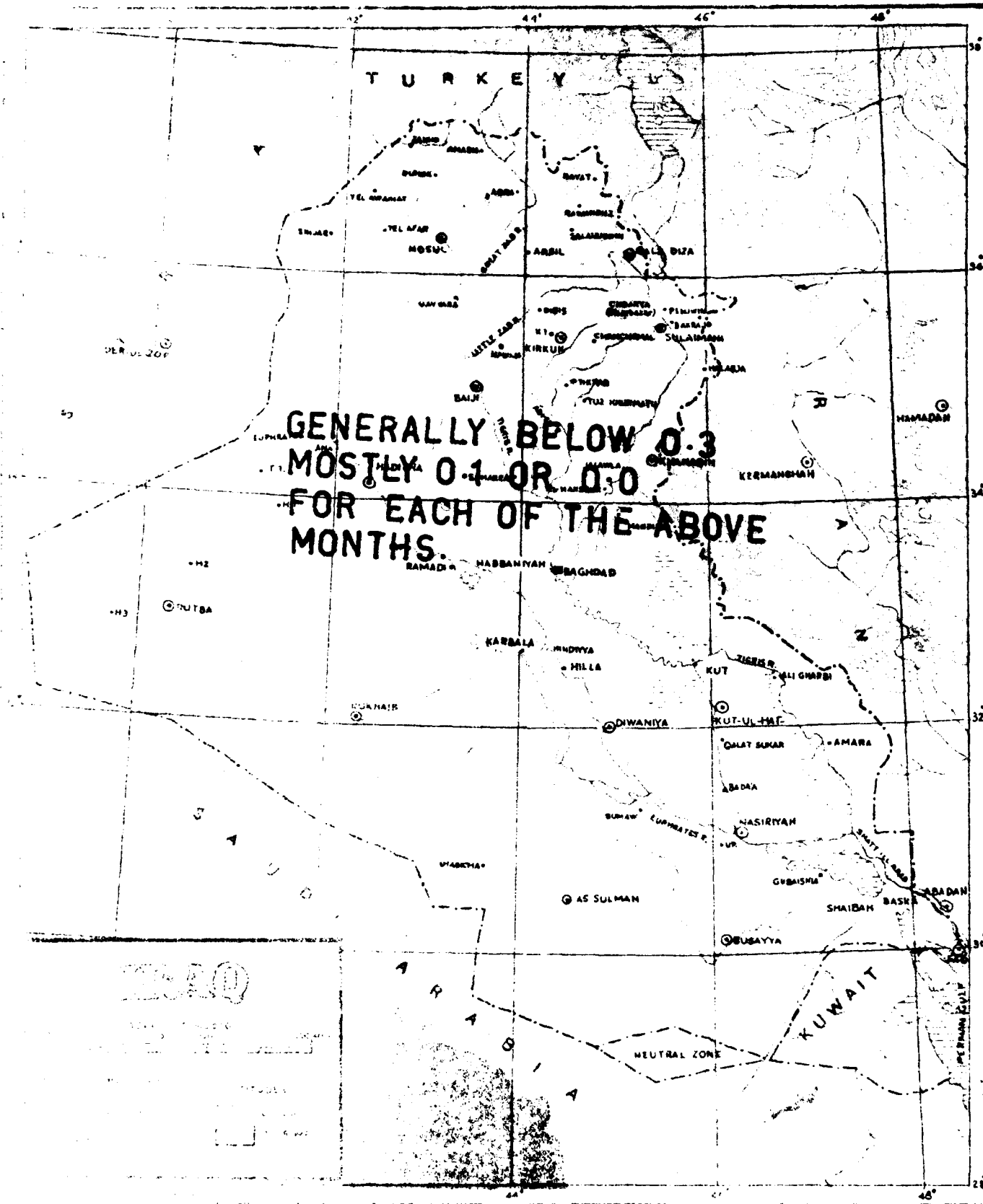


MAY



24
JUN.
JUL.
AUG.
SEP.

PRECIPITATION
Mean Monthly Number of Days with Rain
Period of record see page 2/3

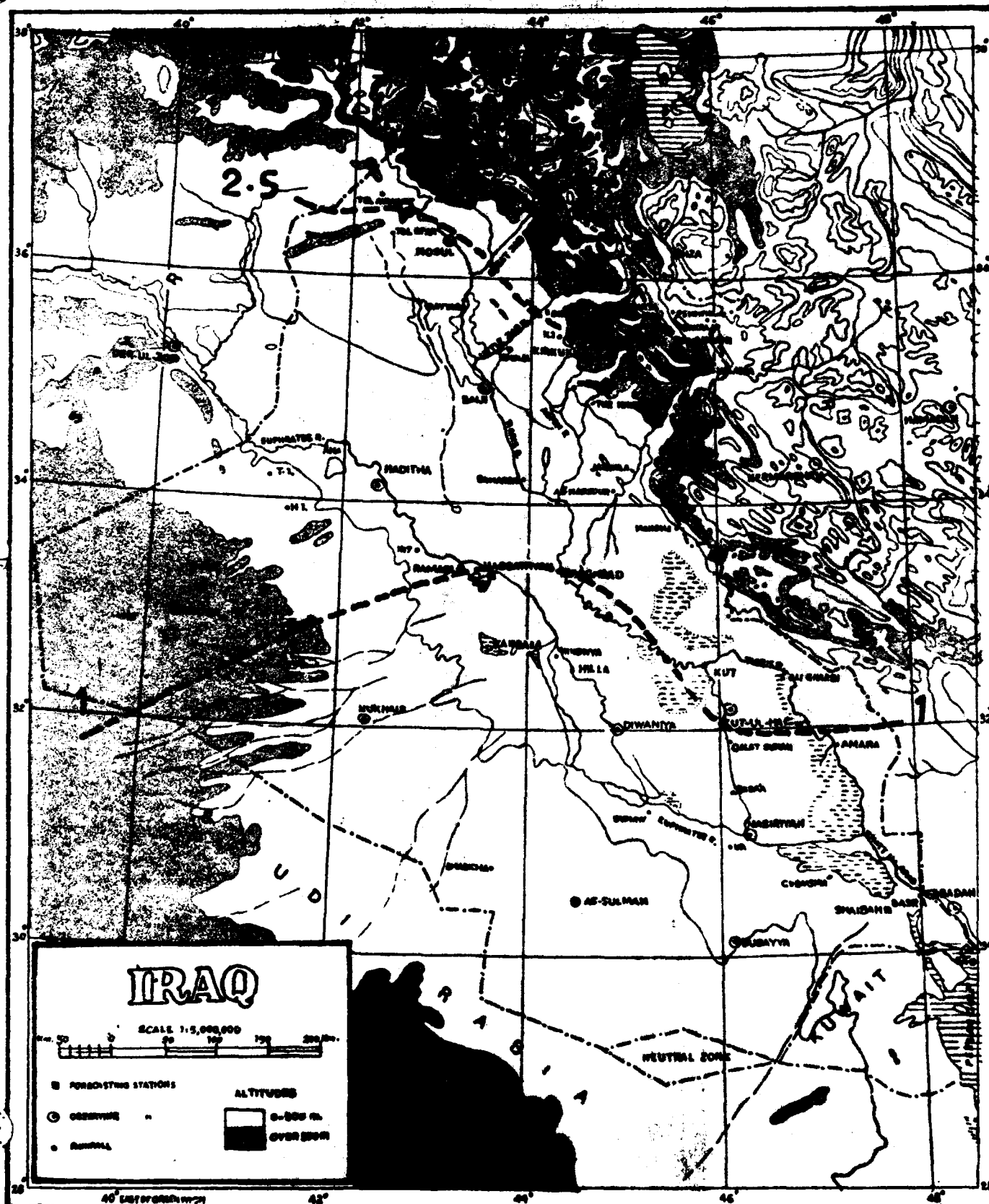


PRECIPITATION

Mean Monthly Number of Days with Rain
Period of records see page 2/3

25

OCTOBER



IRAQ

SCALE 1:5,000,000

0 50 100 200 km

FORECASTING STATIONS

OBSERVING STATIONS

RAINFALL

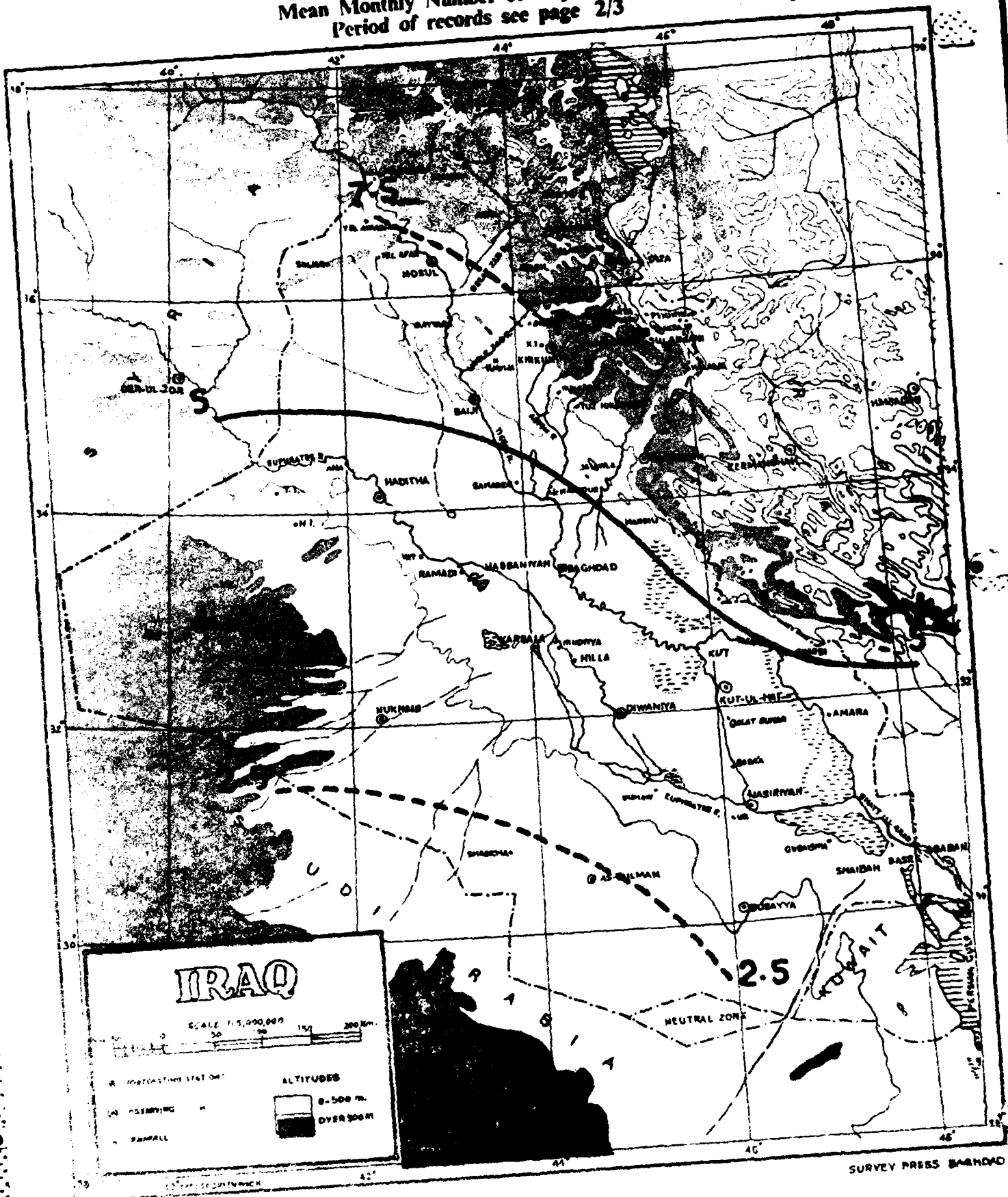
ALTITUDES

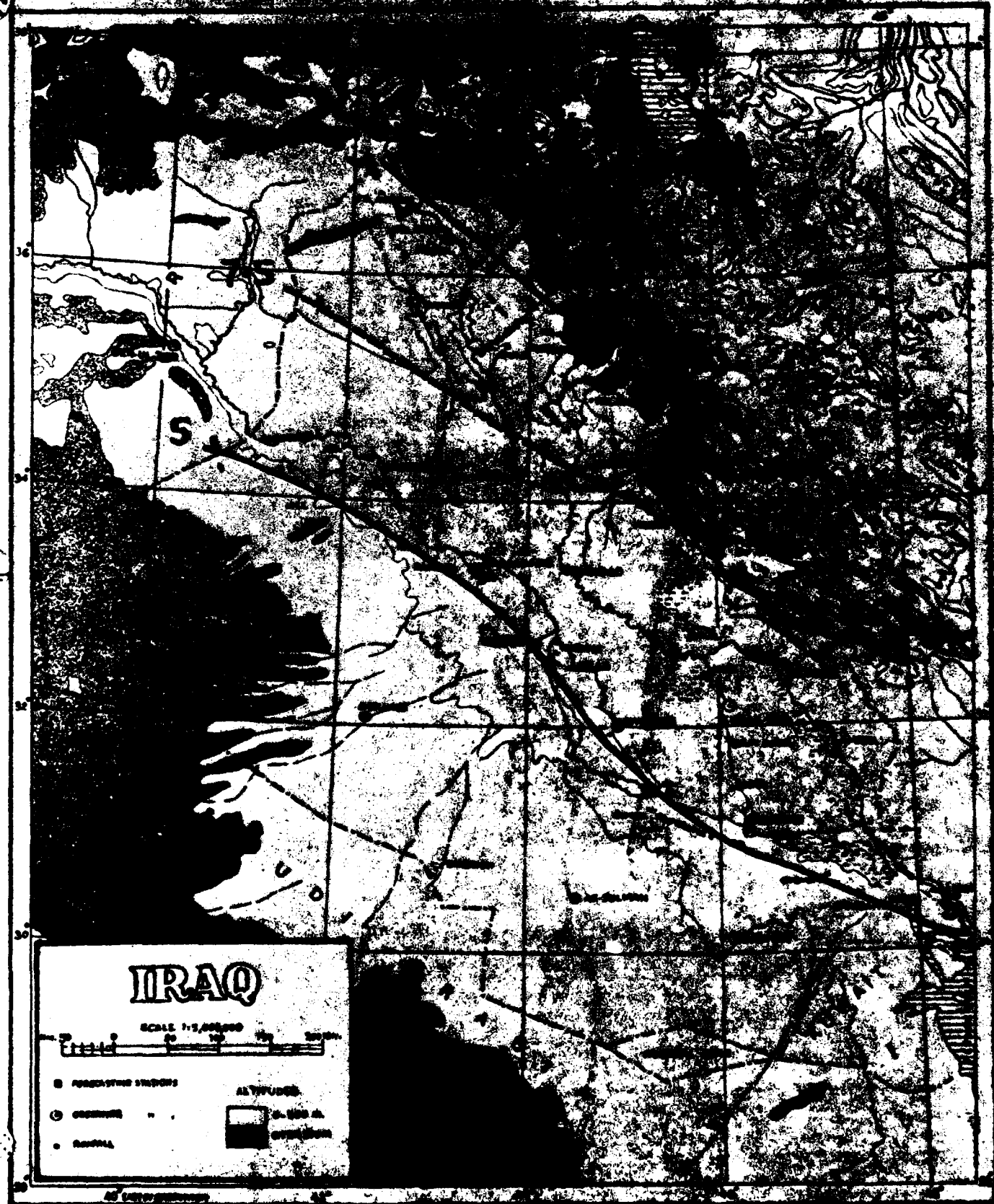
0-500 m.

OVER 500 m.

PRECIPITATION Mean Monthly Number of Days with Rain Period of records see page 2/3

26
NOVEMBER

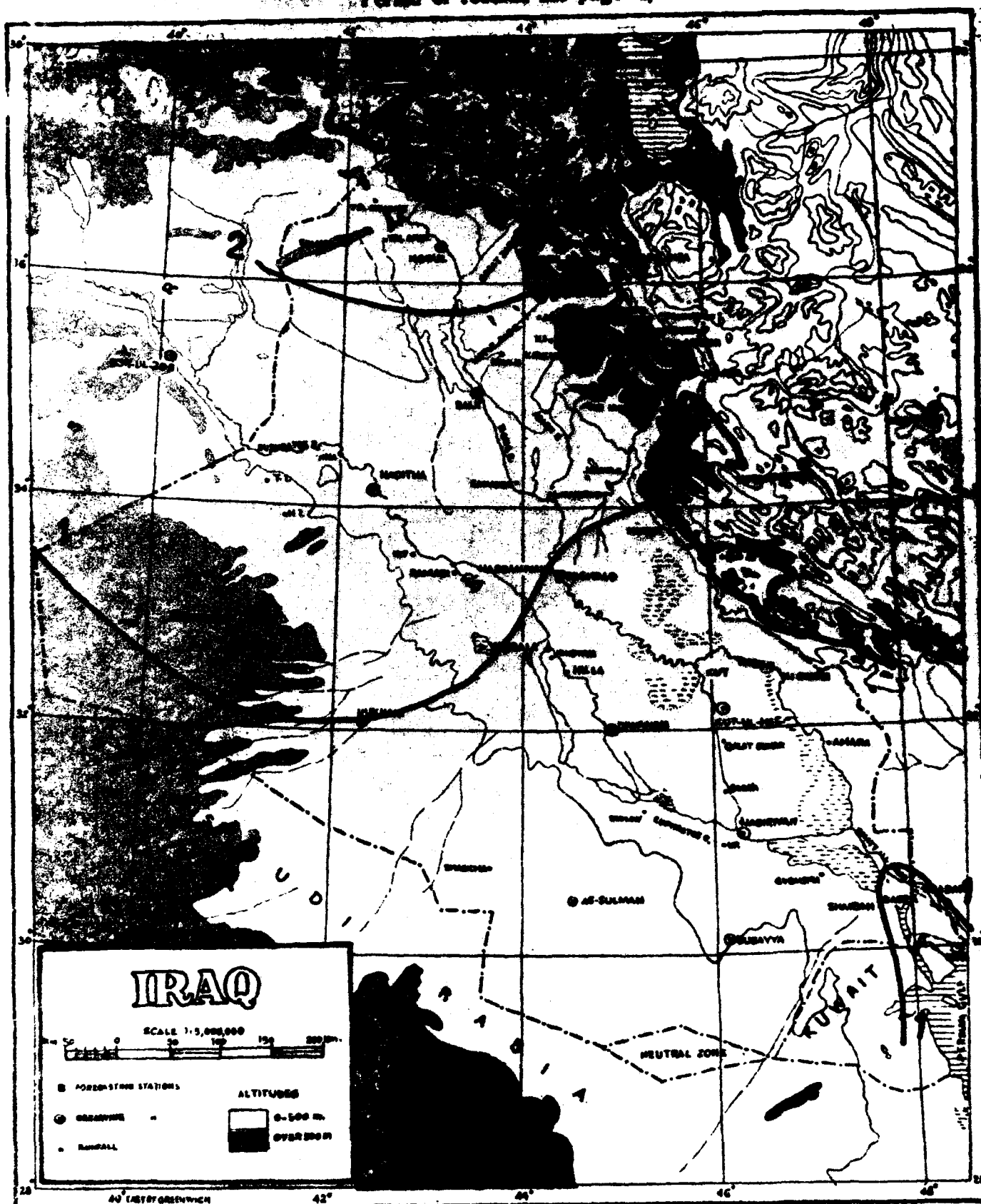




PRECIPITATION

Mean Annual Number of Days with Hail
Period of records see page 2/3

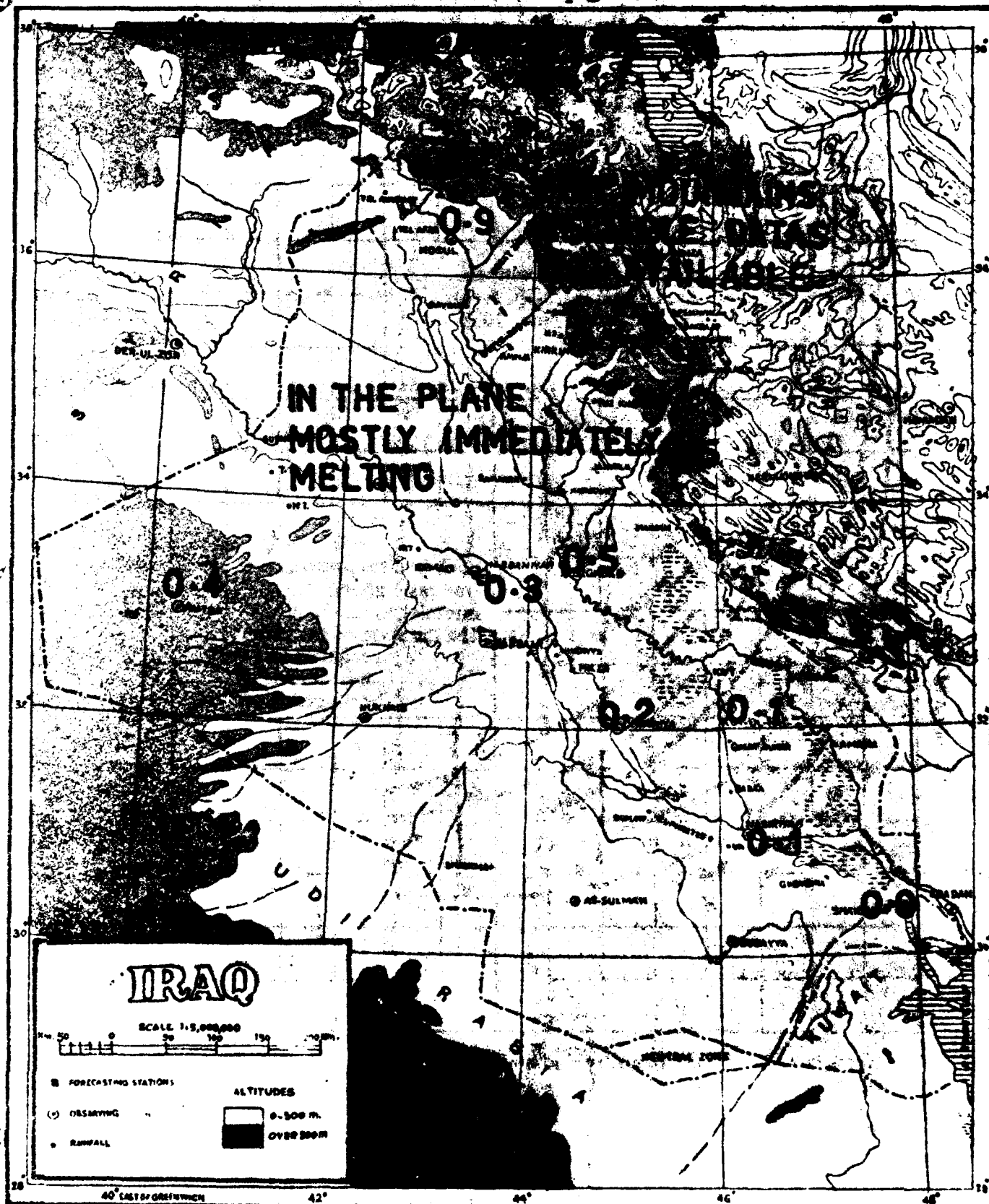
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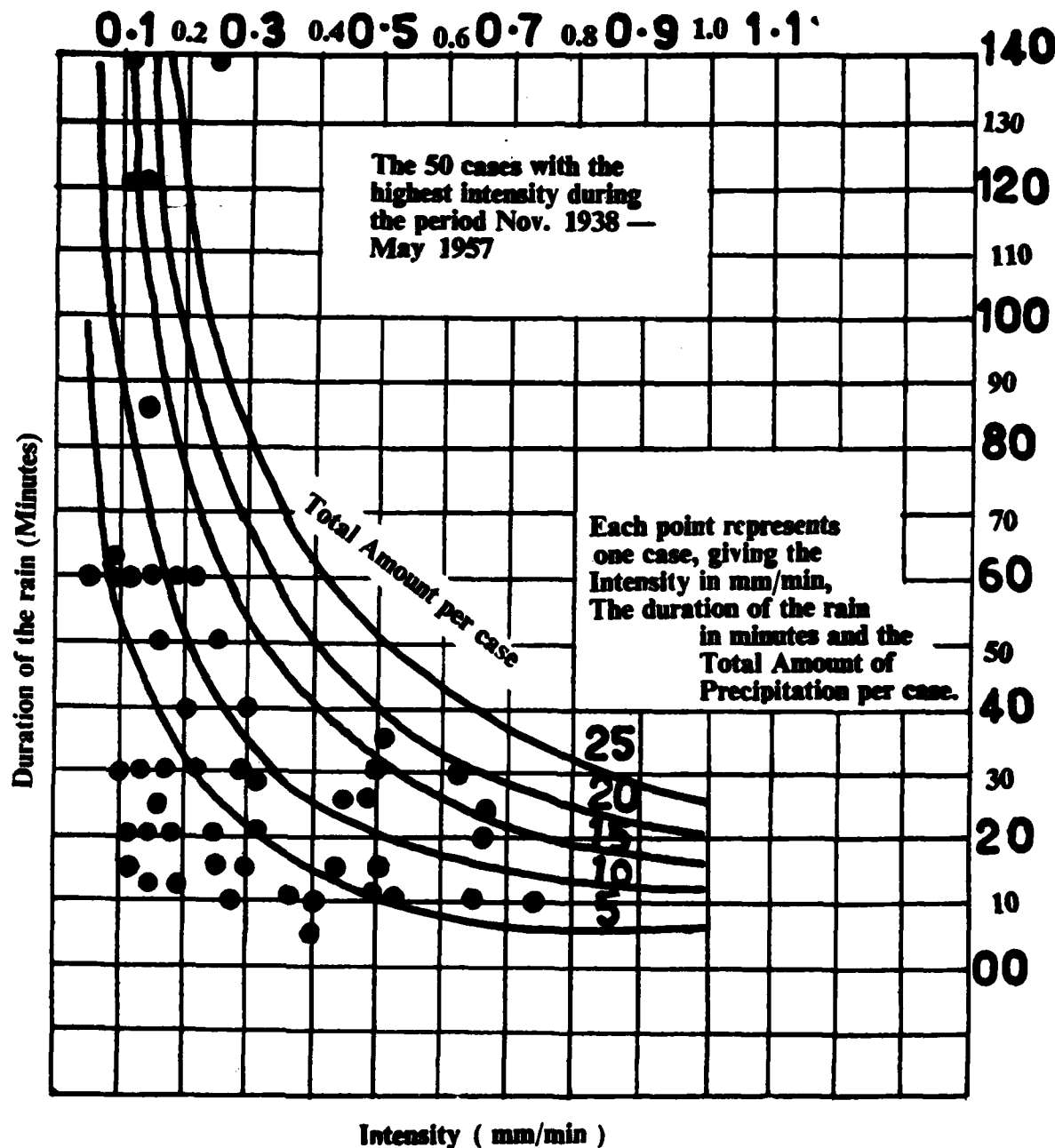
PRECIPITATION

Mean Annual Number of Days with Snow Fall
Period of records see page 2/3

79

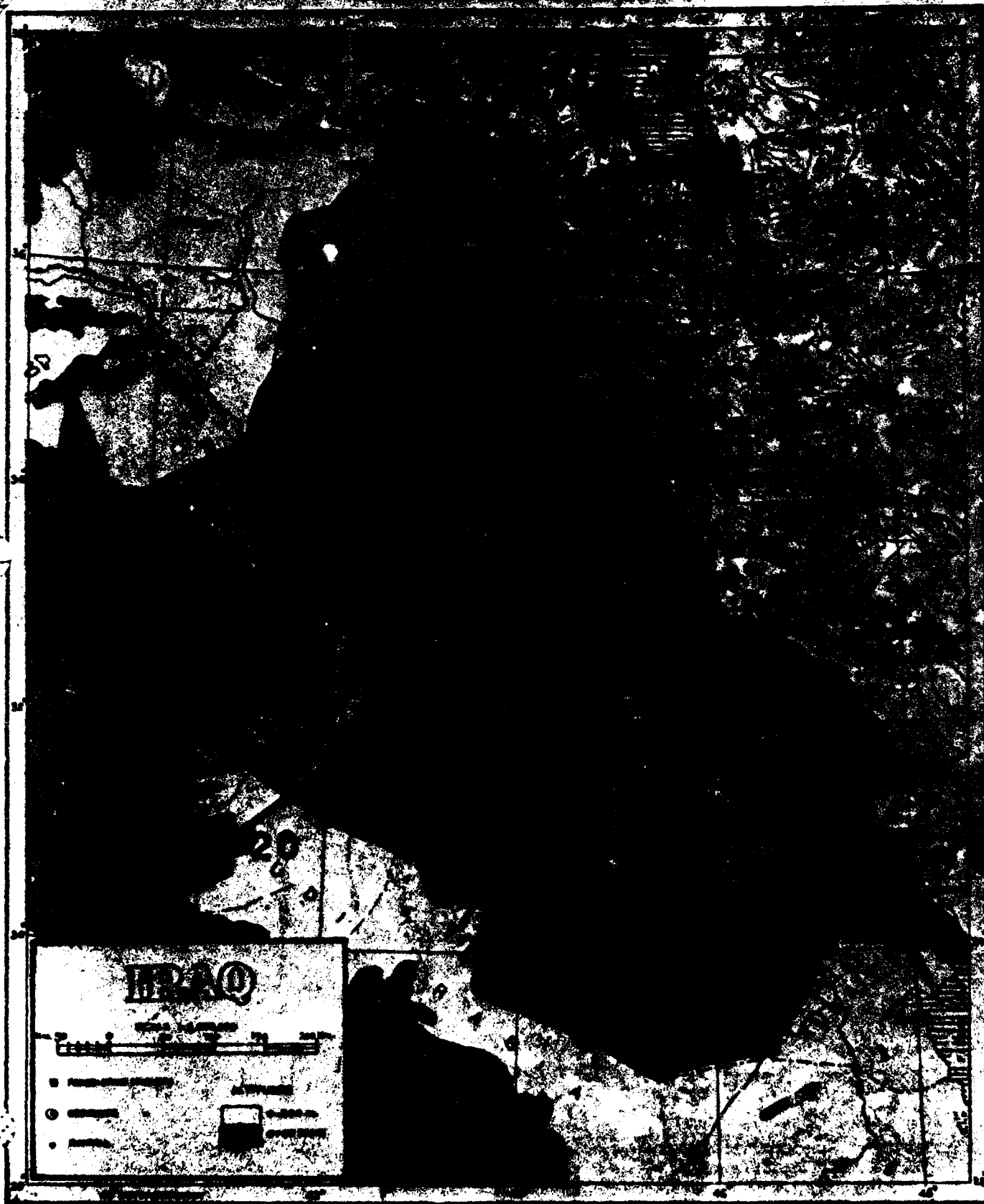


P R E C I P I T A T I O N Intensity of Rain Fall in Baghdad



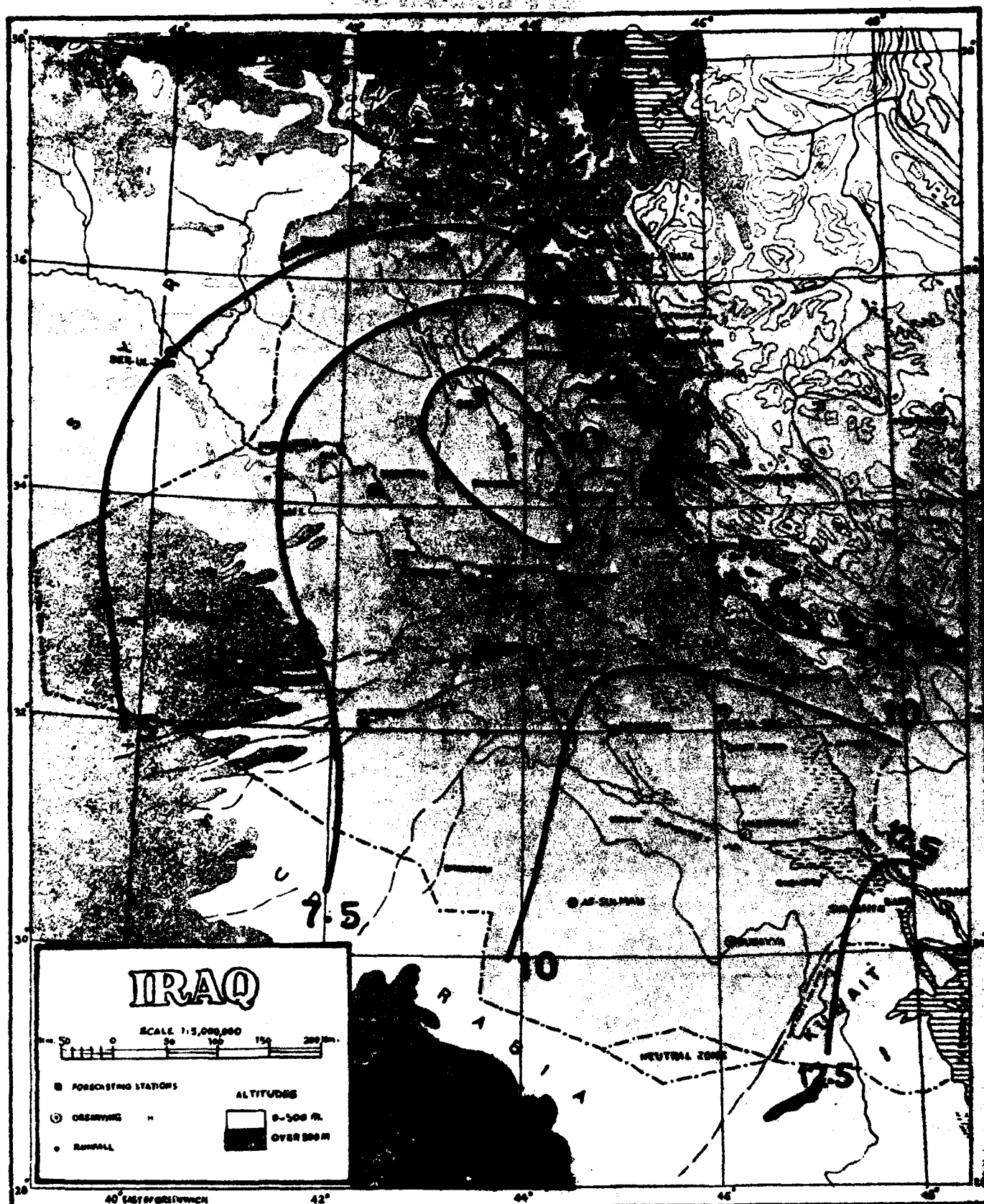
TEMPERATURE

May Annual Temperature
 1950-1951

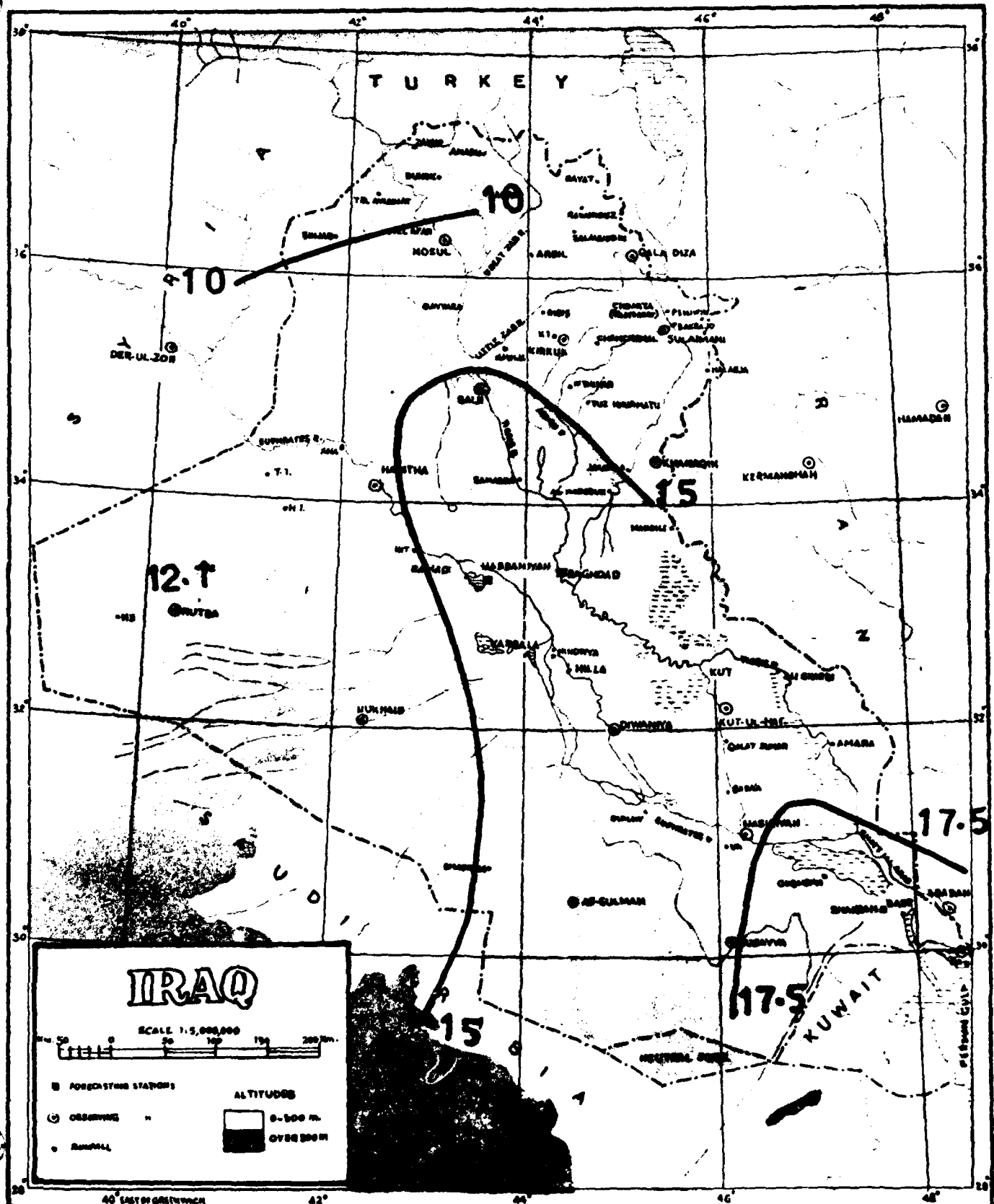


TEMPERATURE
Mean Monthly Temperature
 Period of records see page 2/3

32
JANUARY



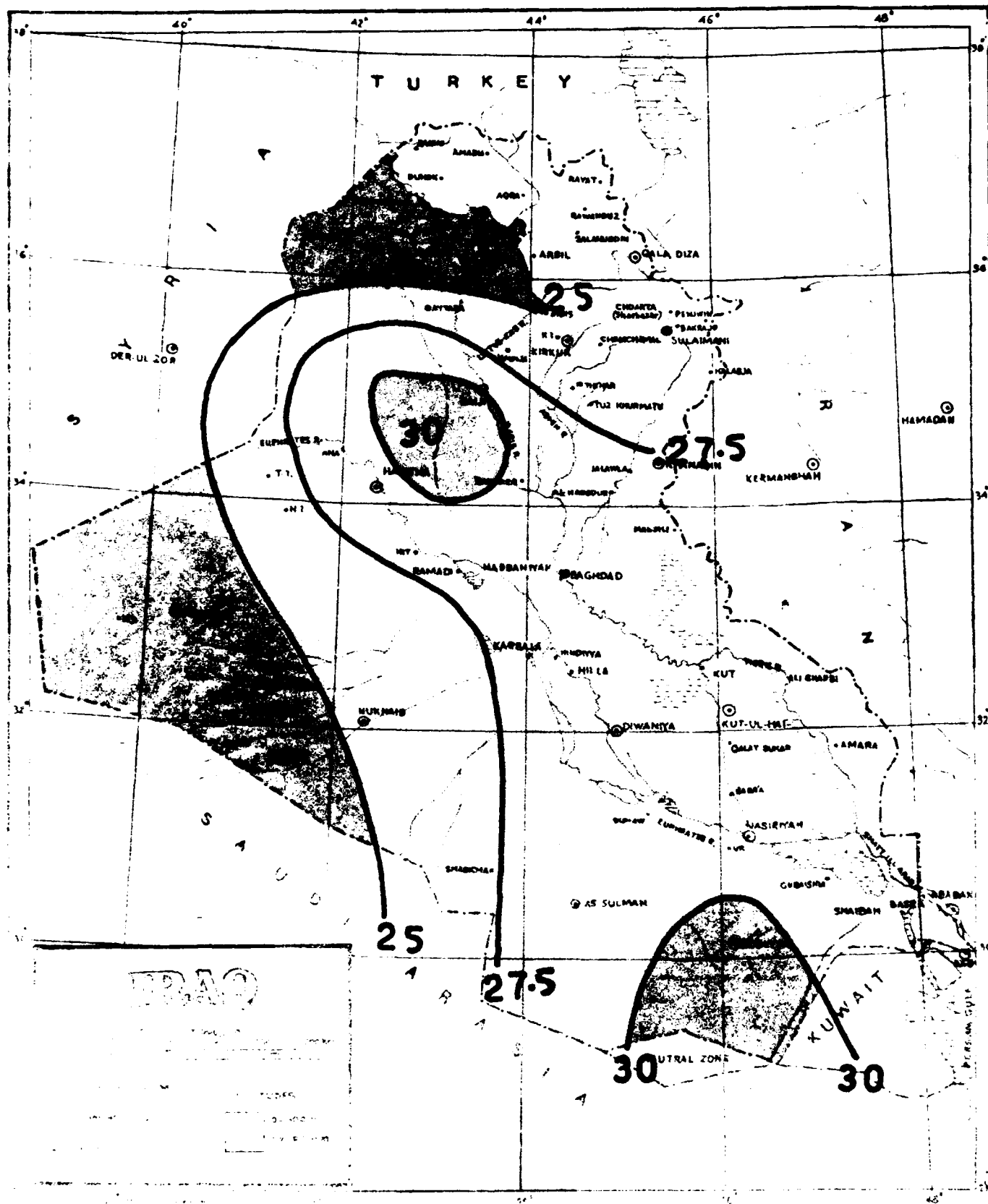
33
MARCH



SURVEY PRESS, BASHOND

TEMPERATURE
Mean Monthly Temperature
Period of records see page 2/3

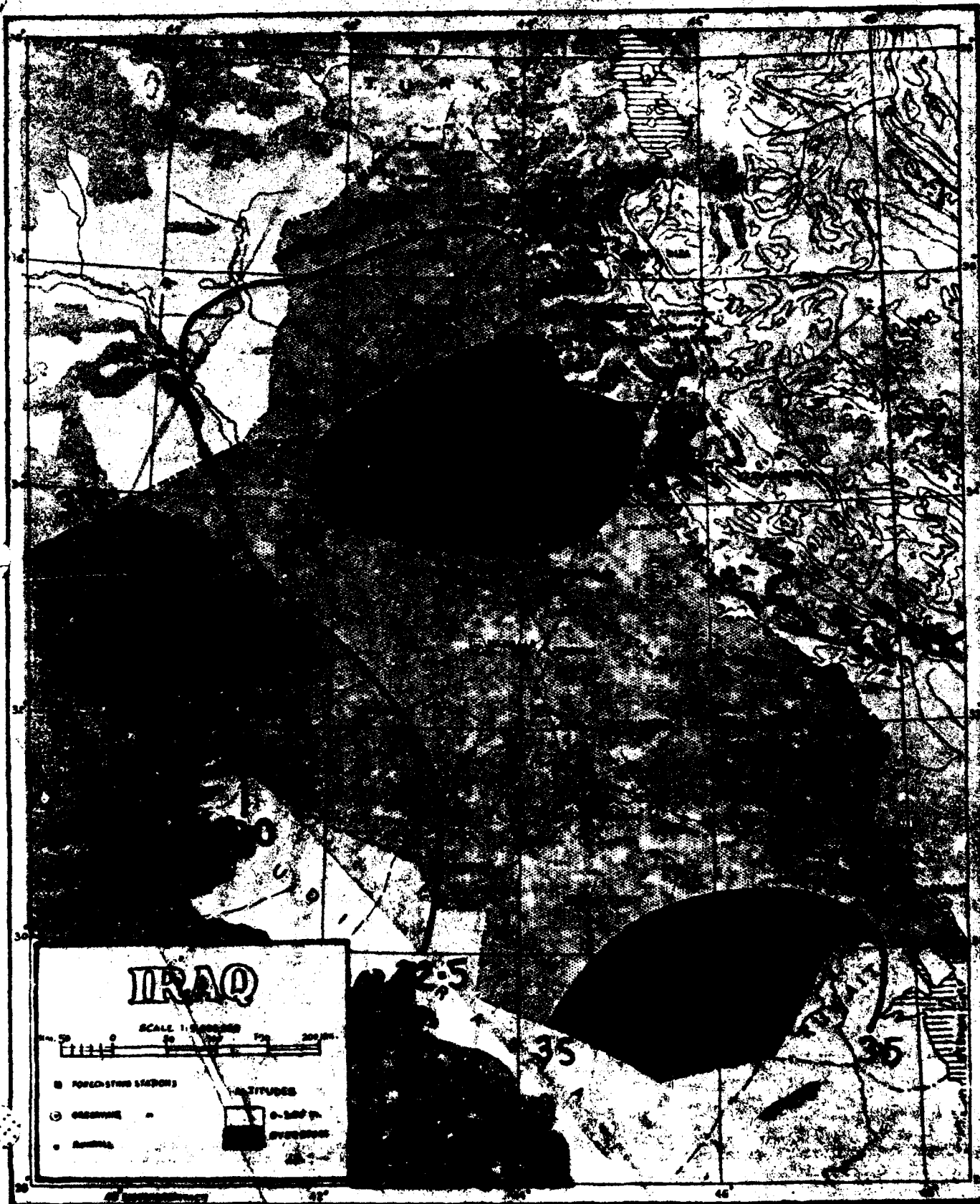
34
MAY



TEMPERATURE

Mean Monthly Temperature
Period of records see page 2/3

JULY



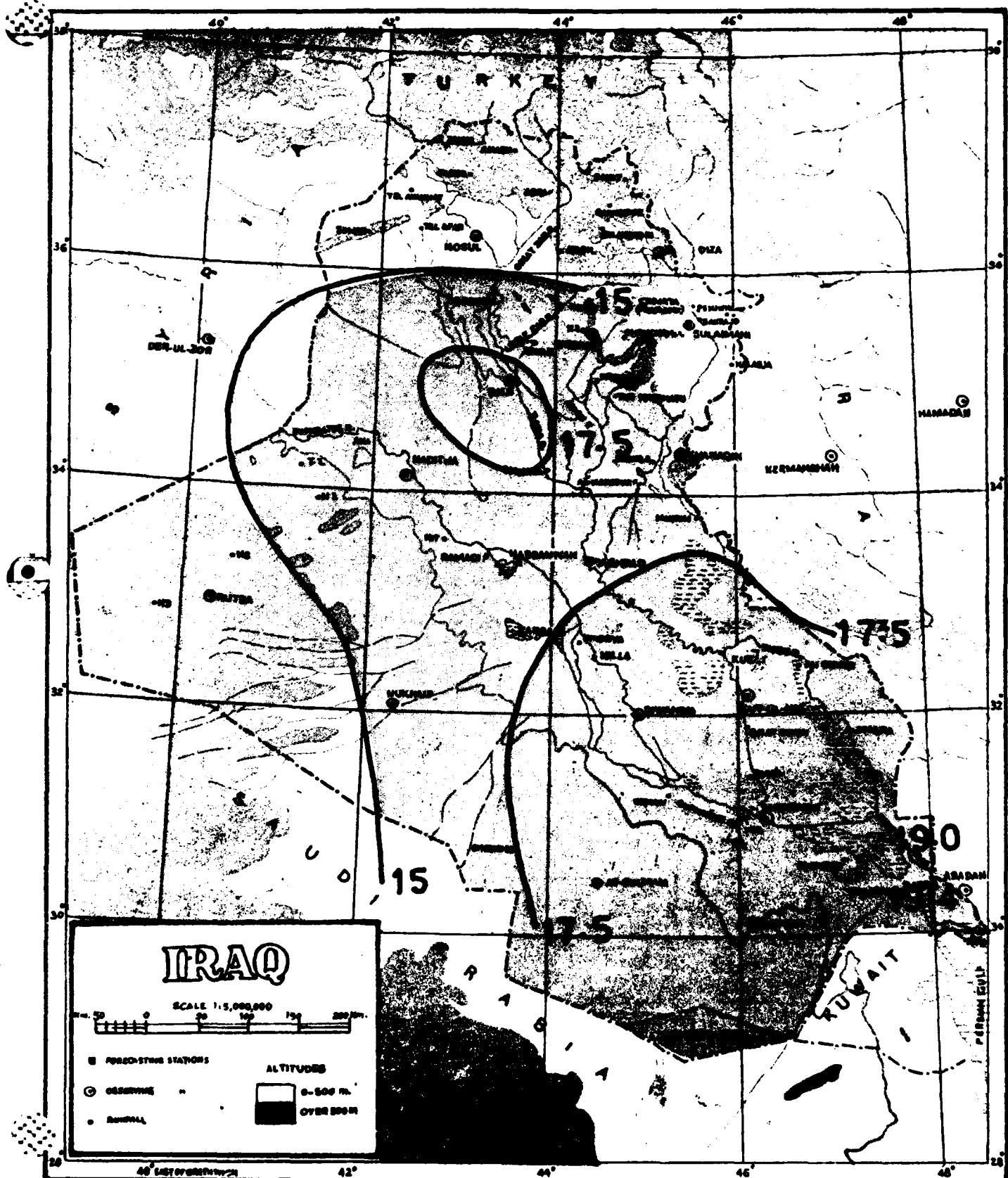
36
SEPTEMBER



TEMPERATURE
Mean Monthly Temperature
period of records see page 2/3

37

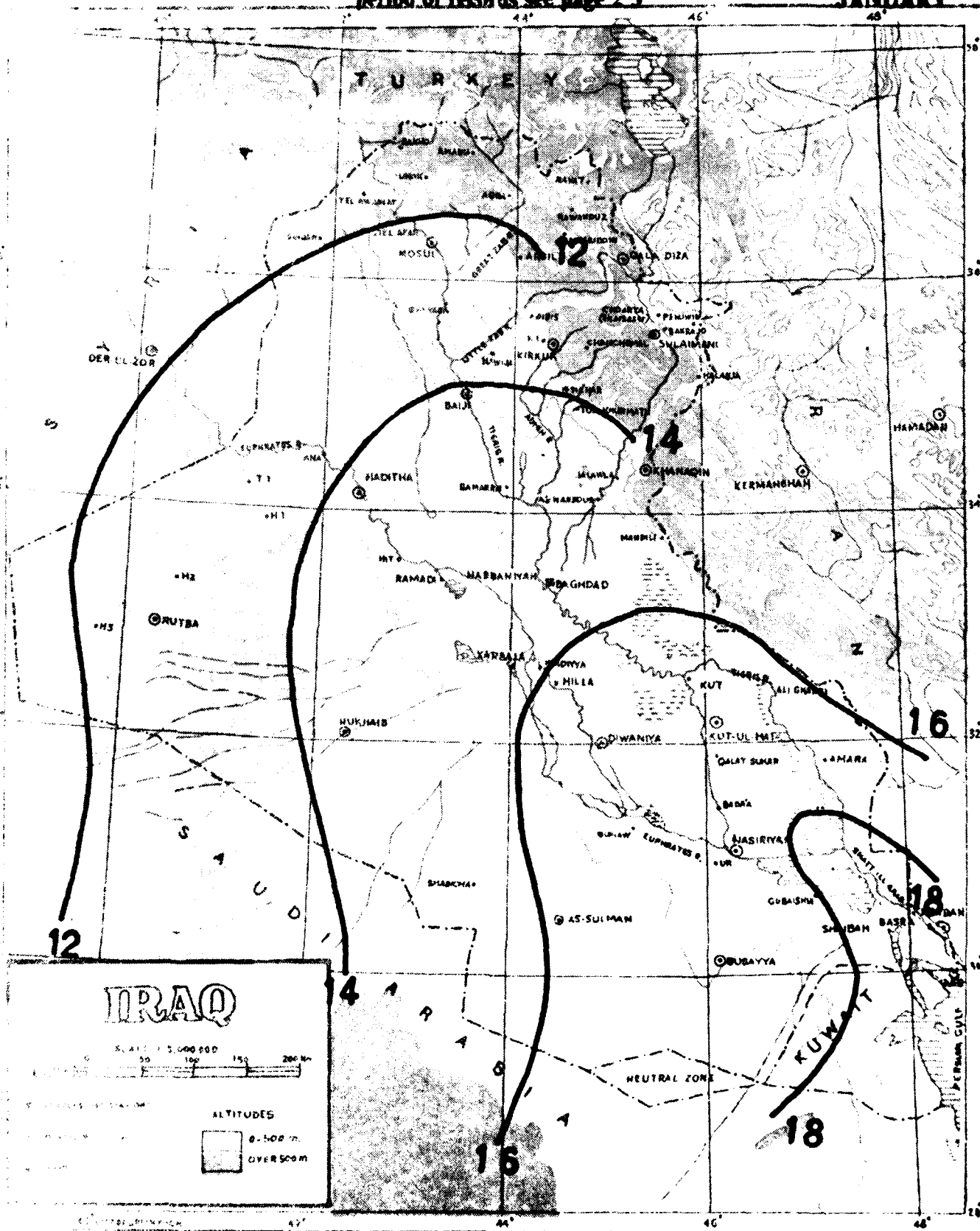
NOVEMBER



TEMPERATURE Mean Monthly Maximum (C) period of records see page 23

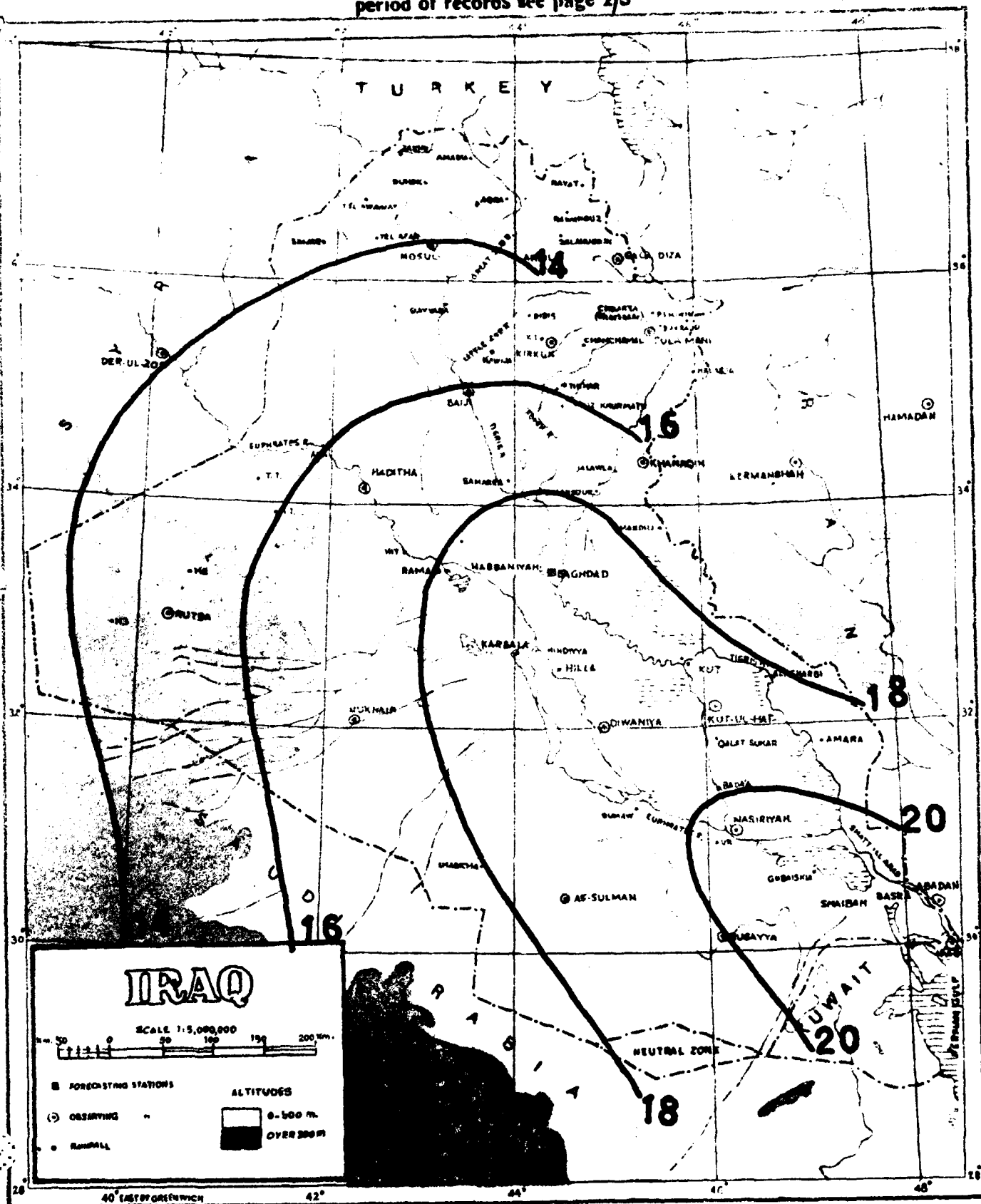
38

JANUARY



TEMPERATURE Mean Monthly Maximum (C°) period of records see page 2/3

39
FEBRUARY



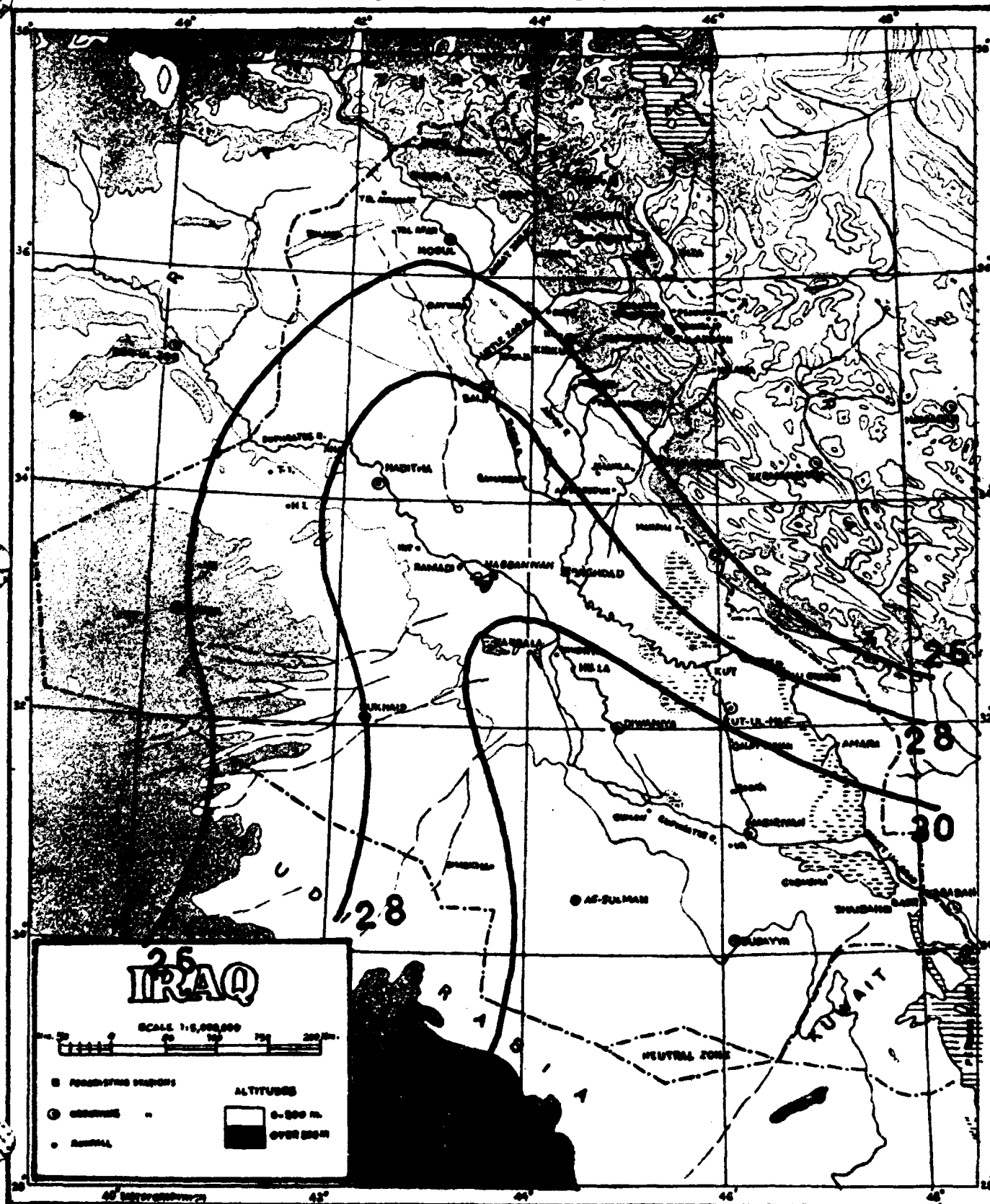
40
MARCH



TEMPERATURE
Mean Monthly Maximum (C°)
 period of records see page 2/3

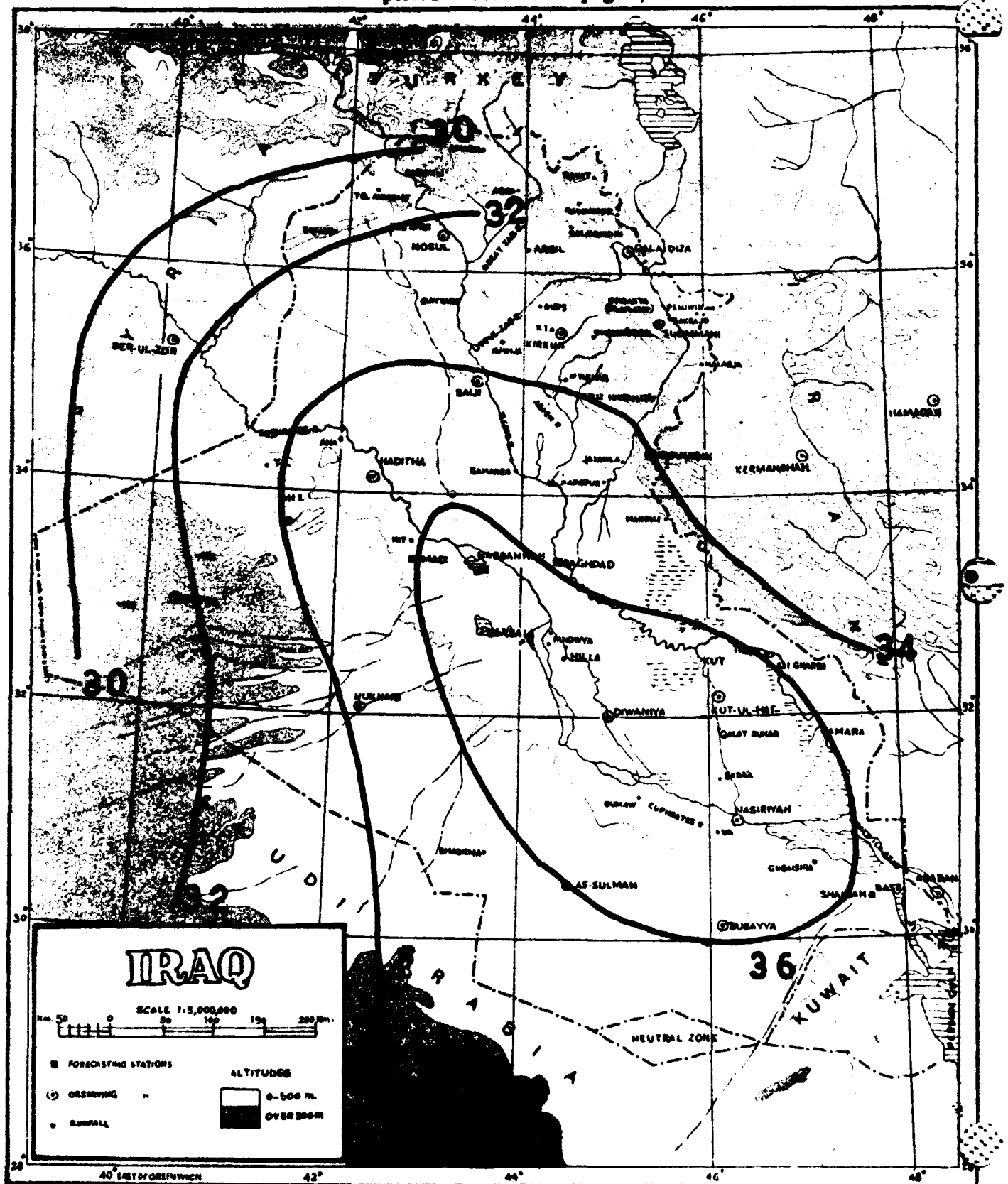
41

APRIL



TEMPERATURE Mean Monthly Maximum (C) period of records see page 2/3

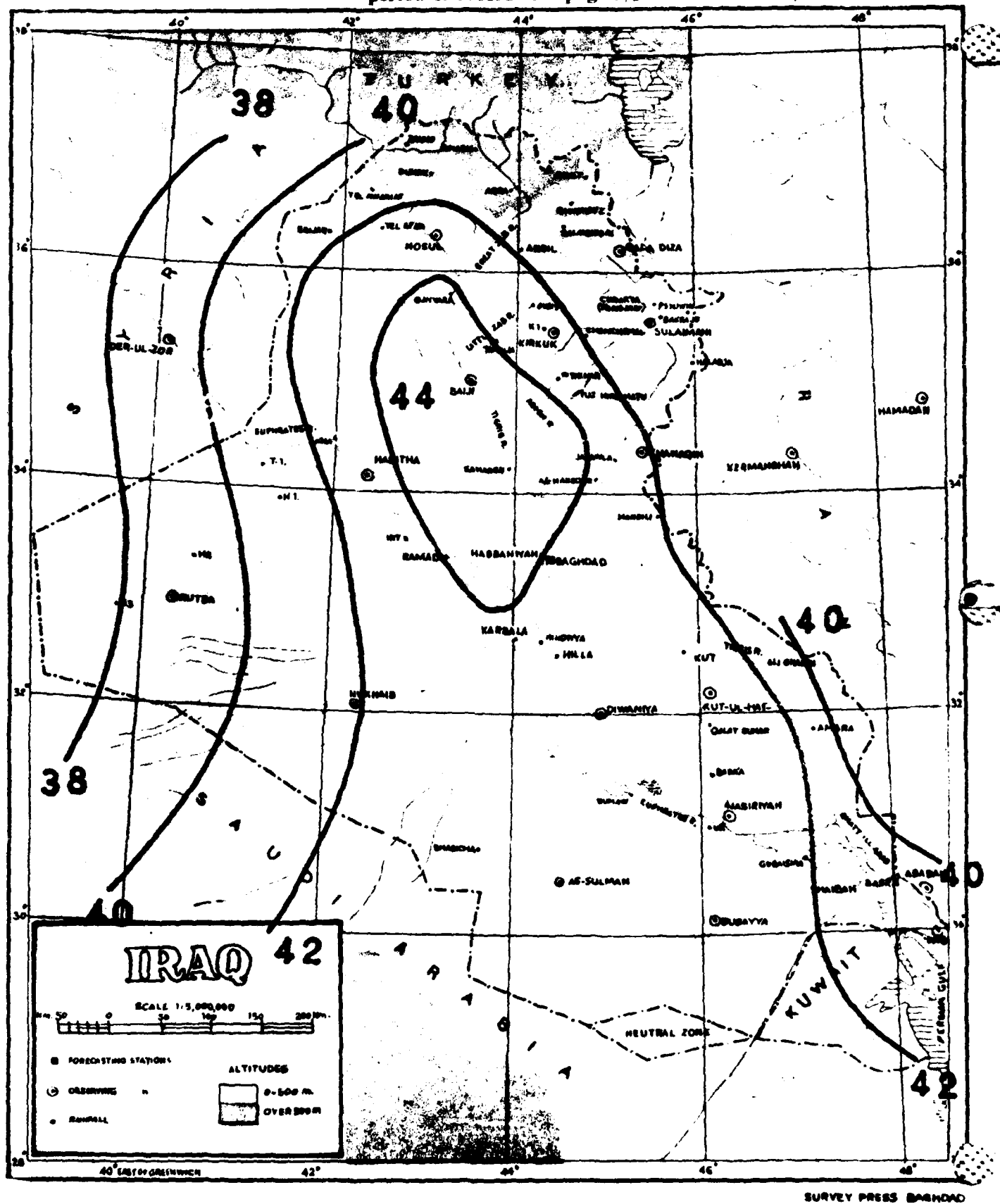
42
MAY



JUNI

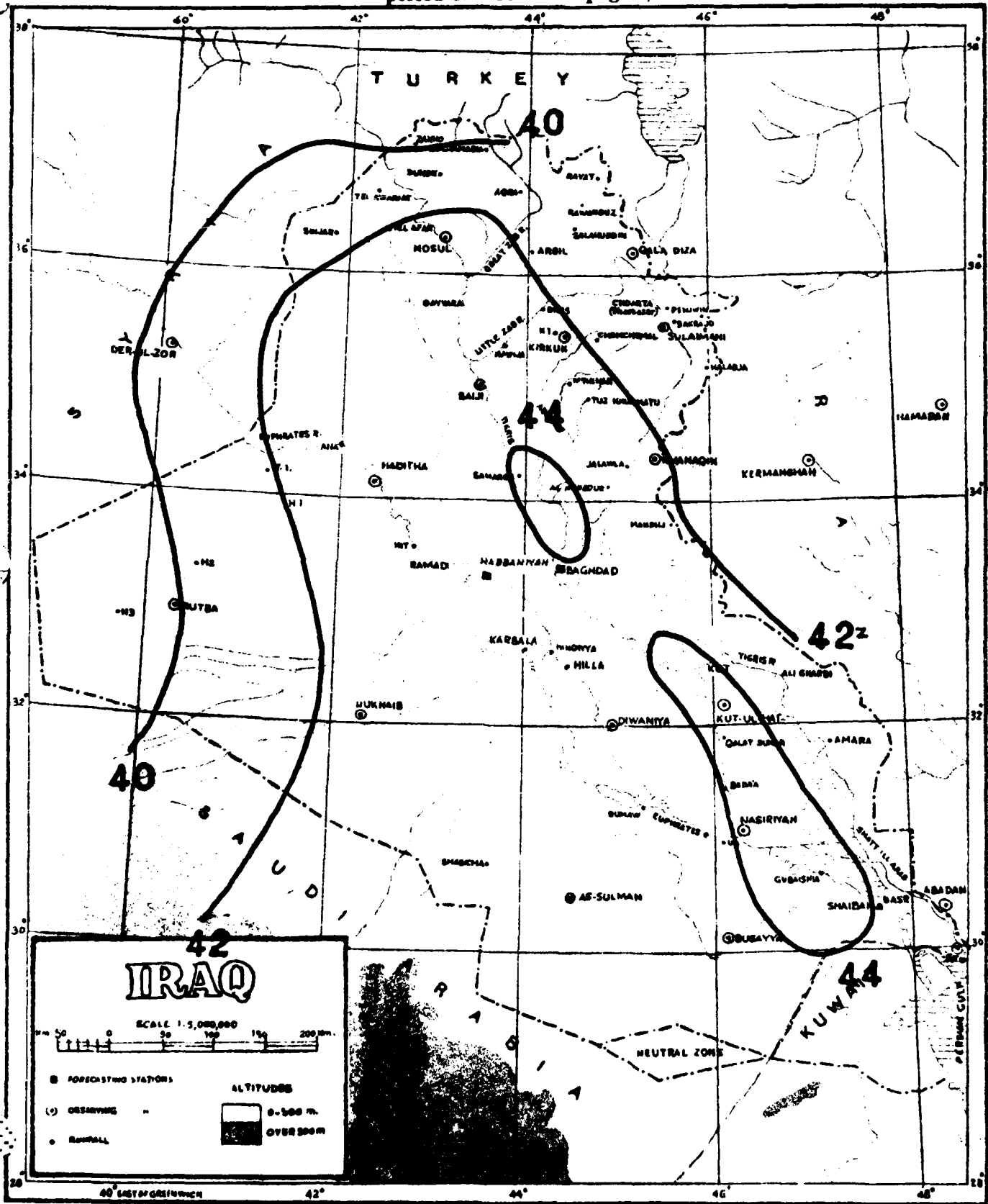


44
JULY



TEMPERATURE
Mean Monthly Maximum (C°)
period of records see page 2/3

45
AUGUST

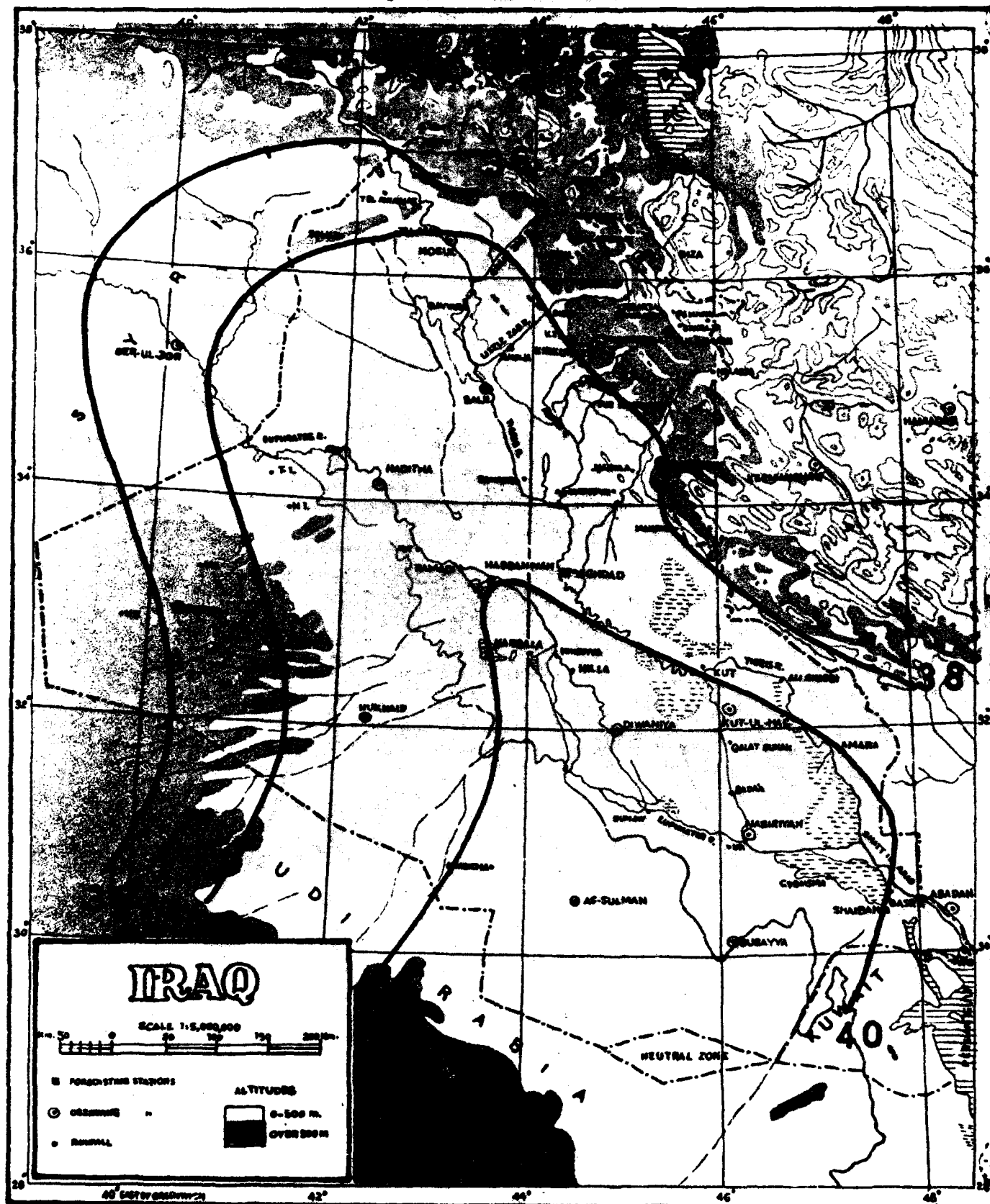


TEMPERATURE

Mean Monthly Maximum (C°)
period of records see page 2/3

46

SEPTEMBER



SURVEY PRESS, BAGHDAD.

OCTOBER



IRAQ

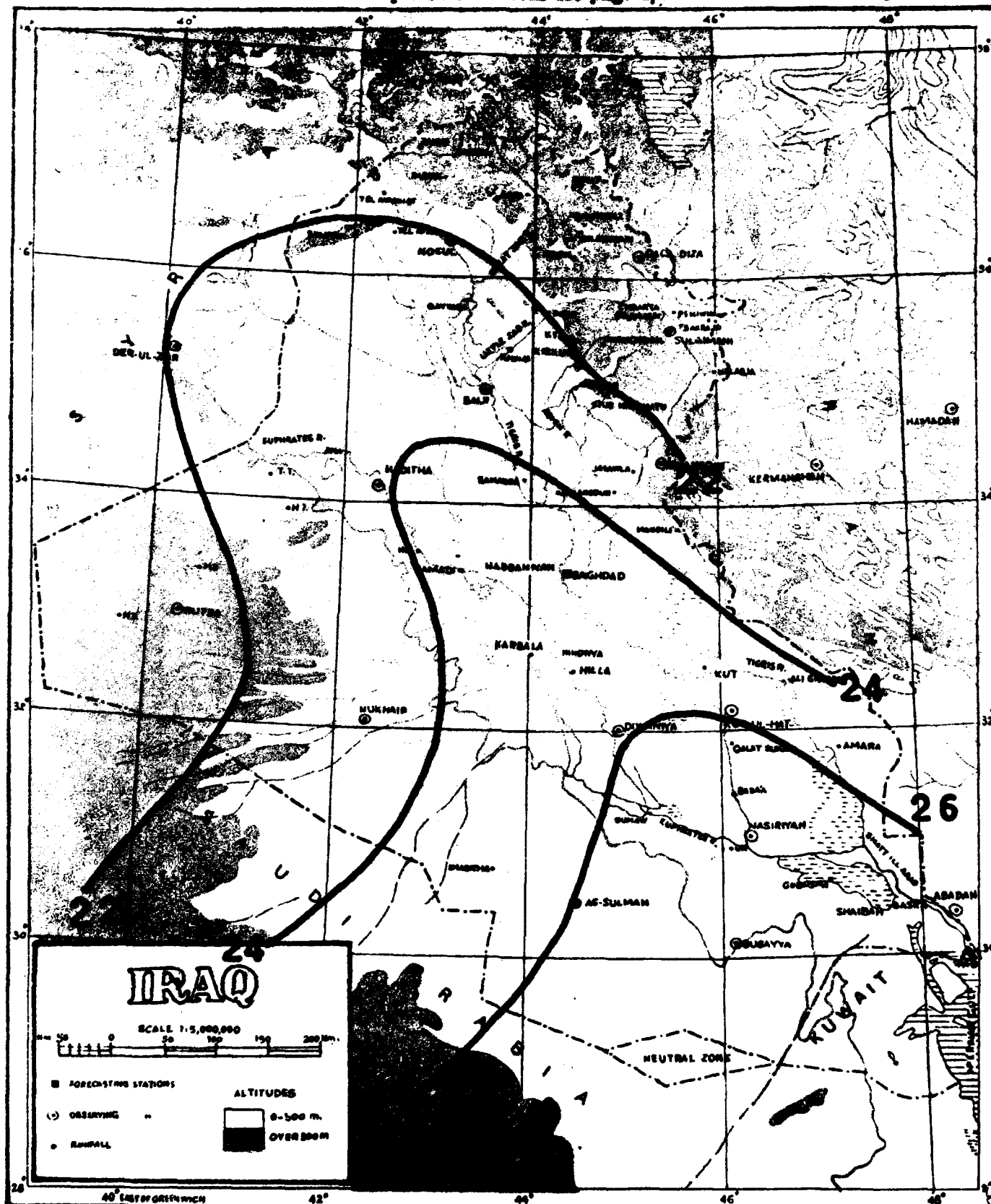
SCALE 1:5,000,000

- POLITICAL BOUNDARIES
- CITIES
- RIVERS

TEMPERATURE Mean Monthly Maximum (C°) period of records see page 2/3

48

NOVEMBER

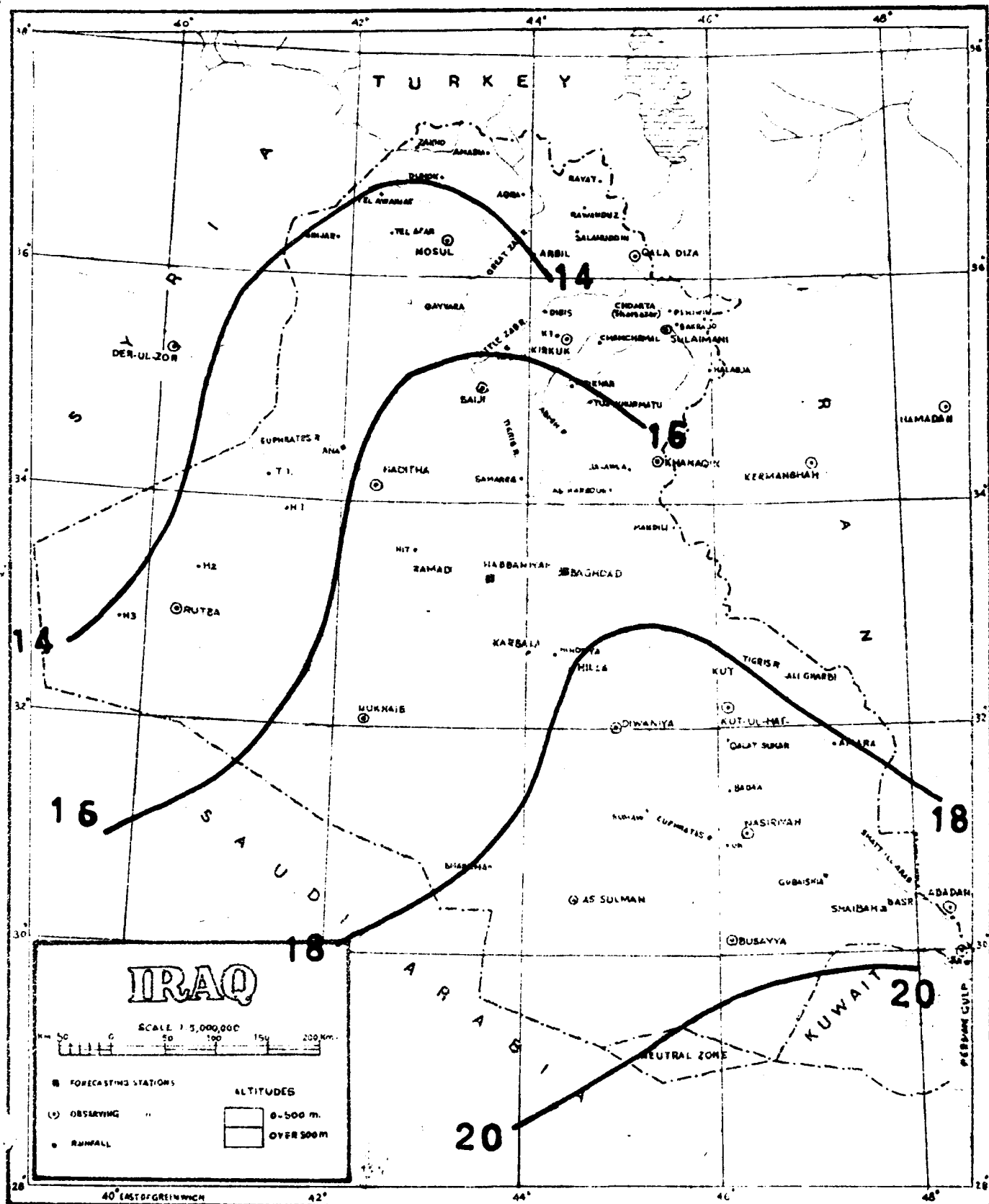


SURVEY PRESS. BAGHDAD.

TEMPERATURE Mean Monthly Maximum (C°) period of records see page 2/3

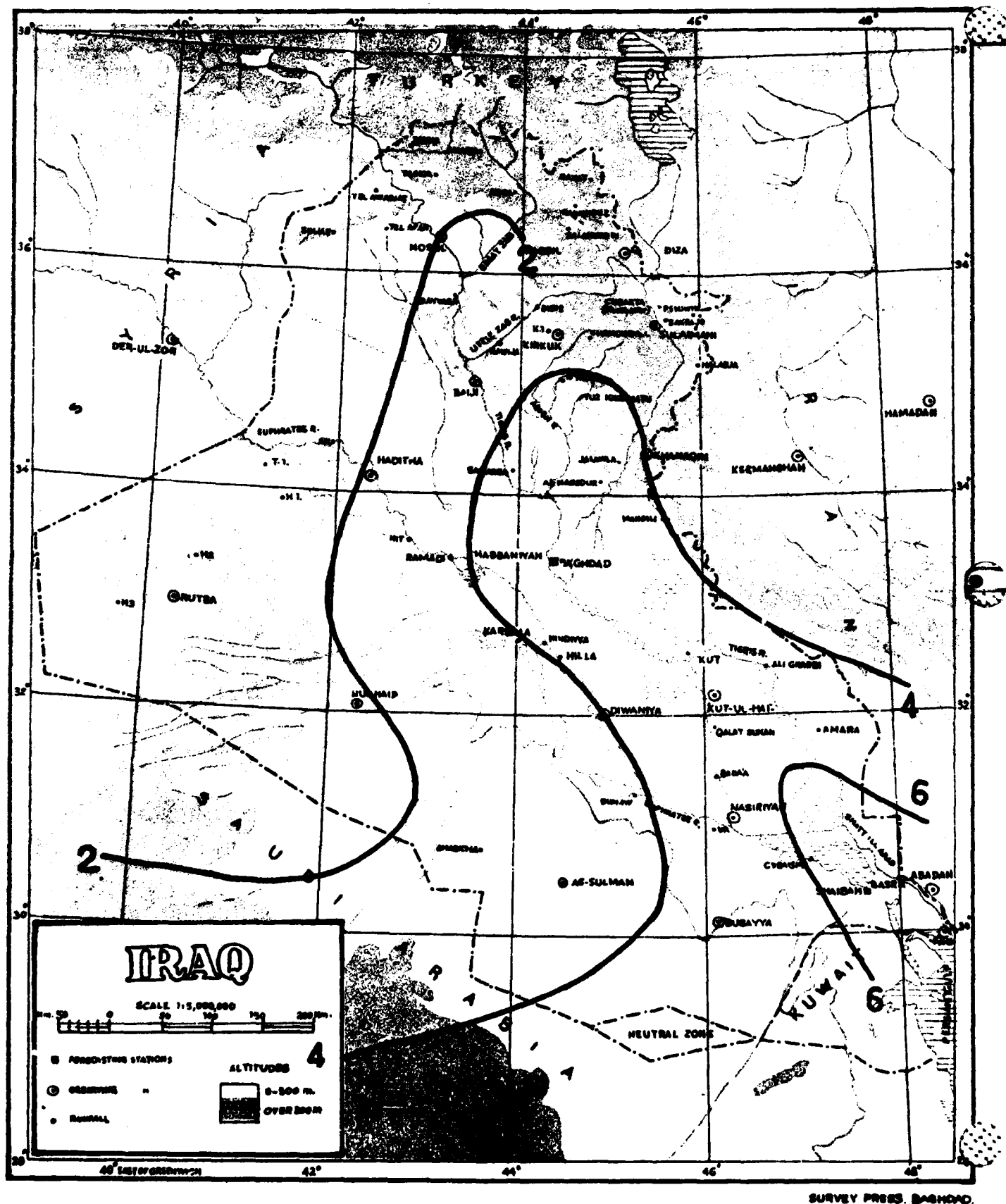
49

DECEMBER



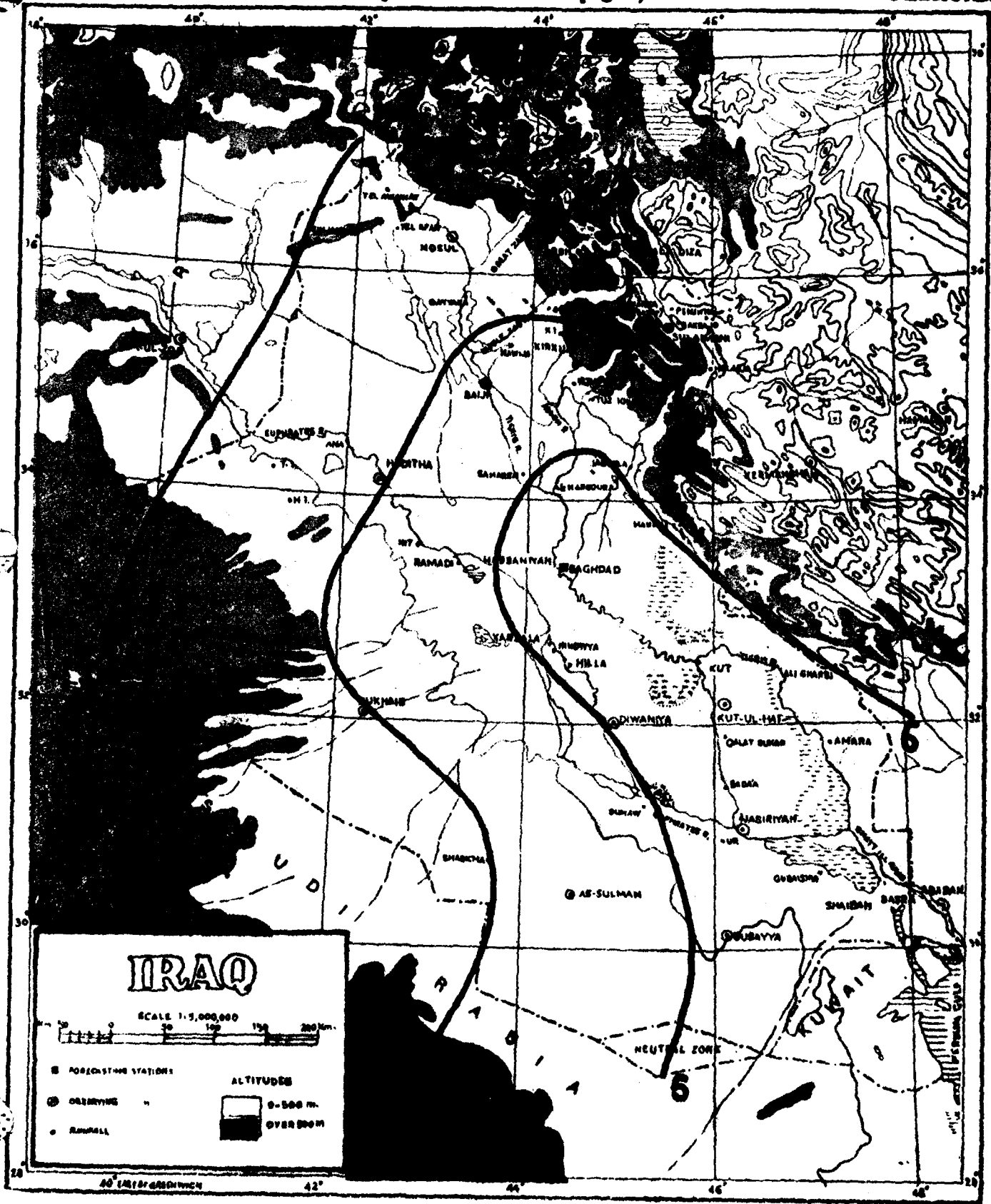
TEMPERATURE
Mean Monthly Minimum (C)
period of records see page 2/3

50
JANUARY



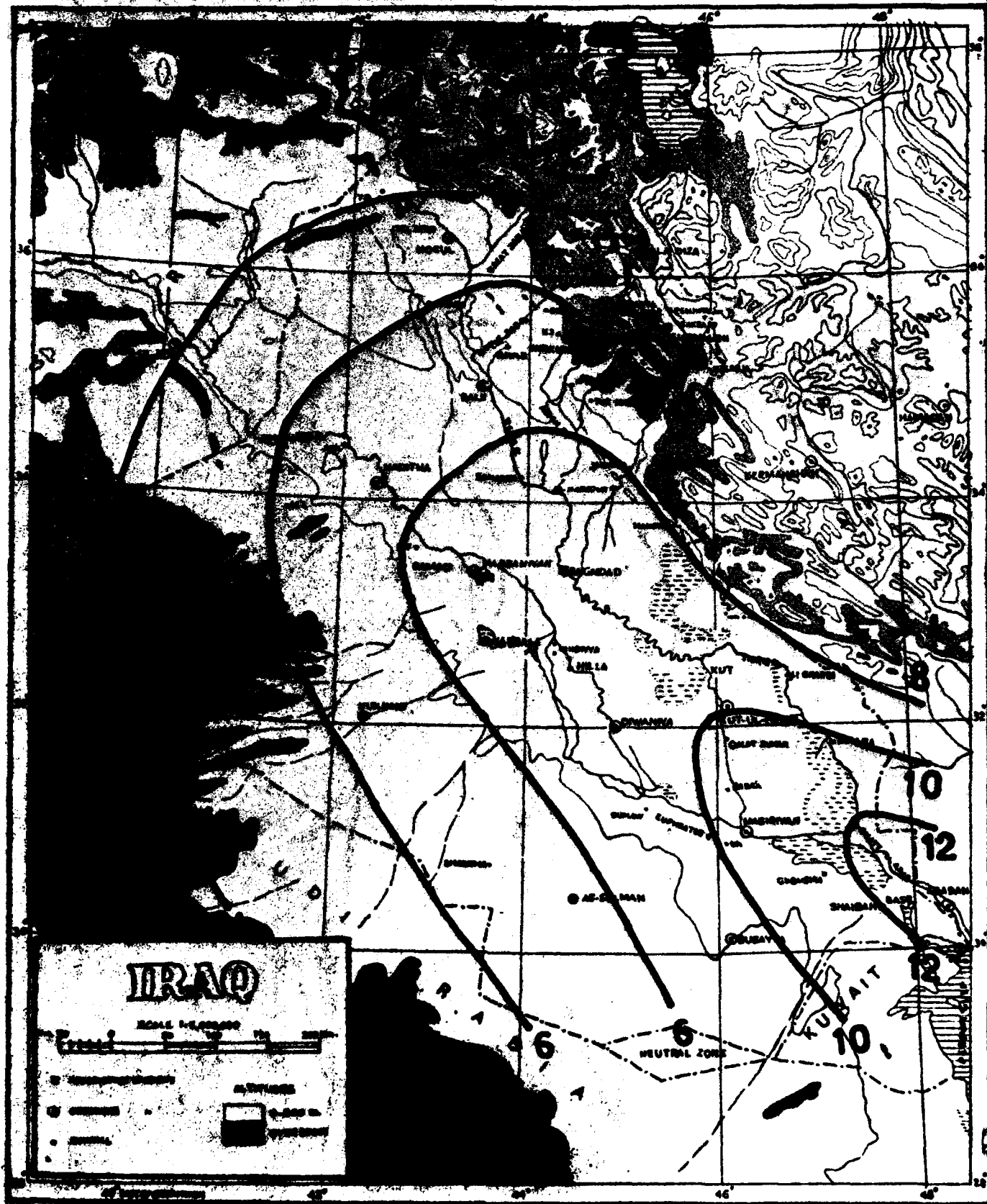
TEMPERATURE
Mean Monthly Minimum (C°)
 period of records see page 2/3

51
FEBRUARY



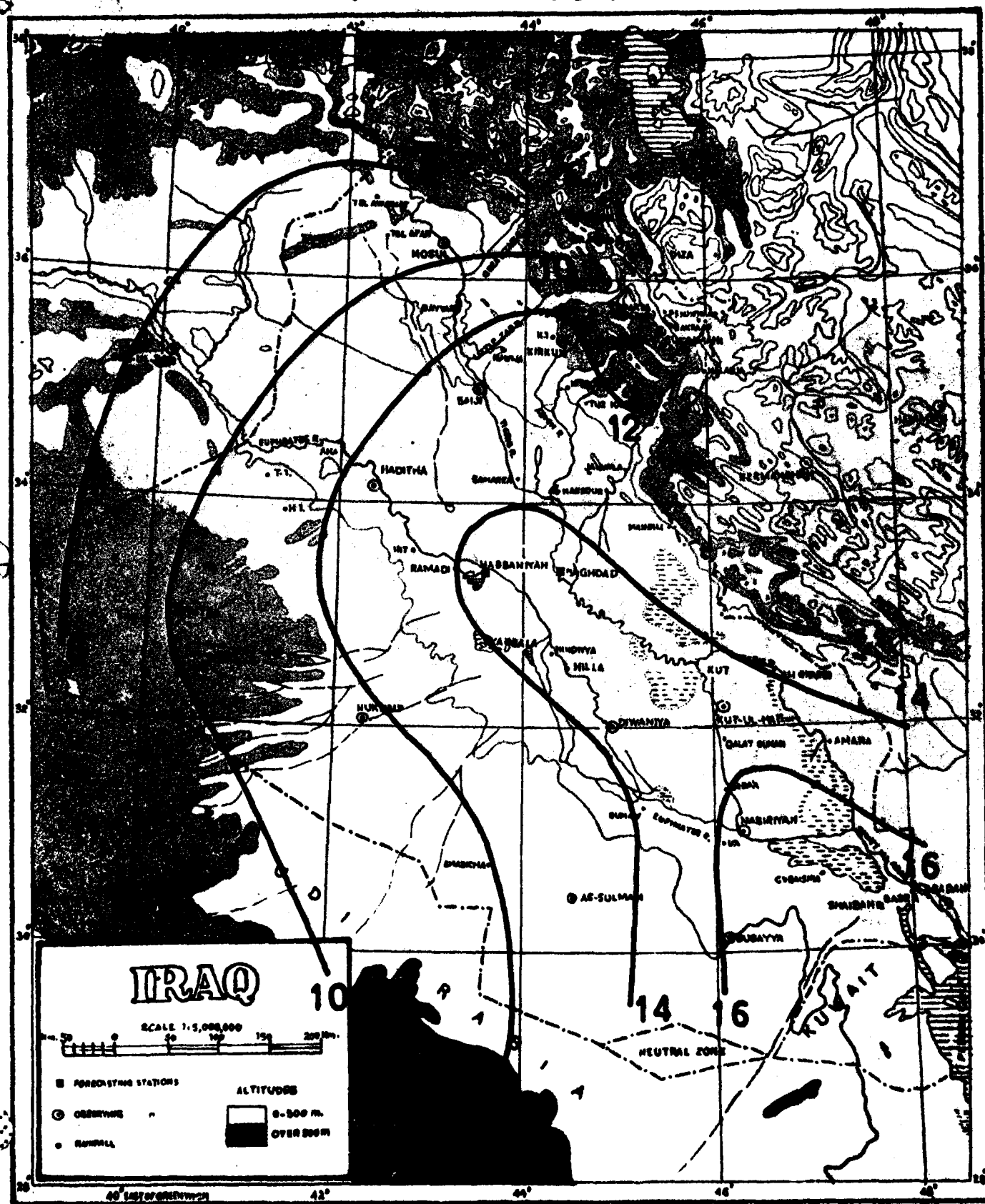
TEMPERATURE
 Mean Monthly Minimum (°C)
 period of records see page 2/3

52
MARCH



TEMPERATURE
Mean Monthly Minimum (C°)
 period of records see page 2/3

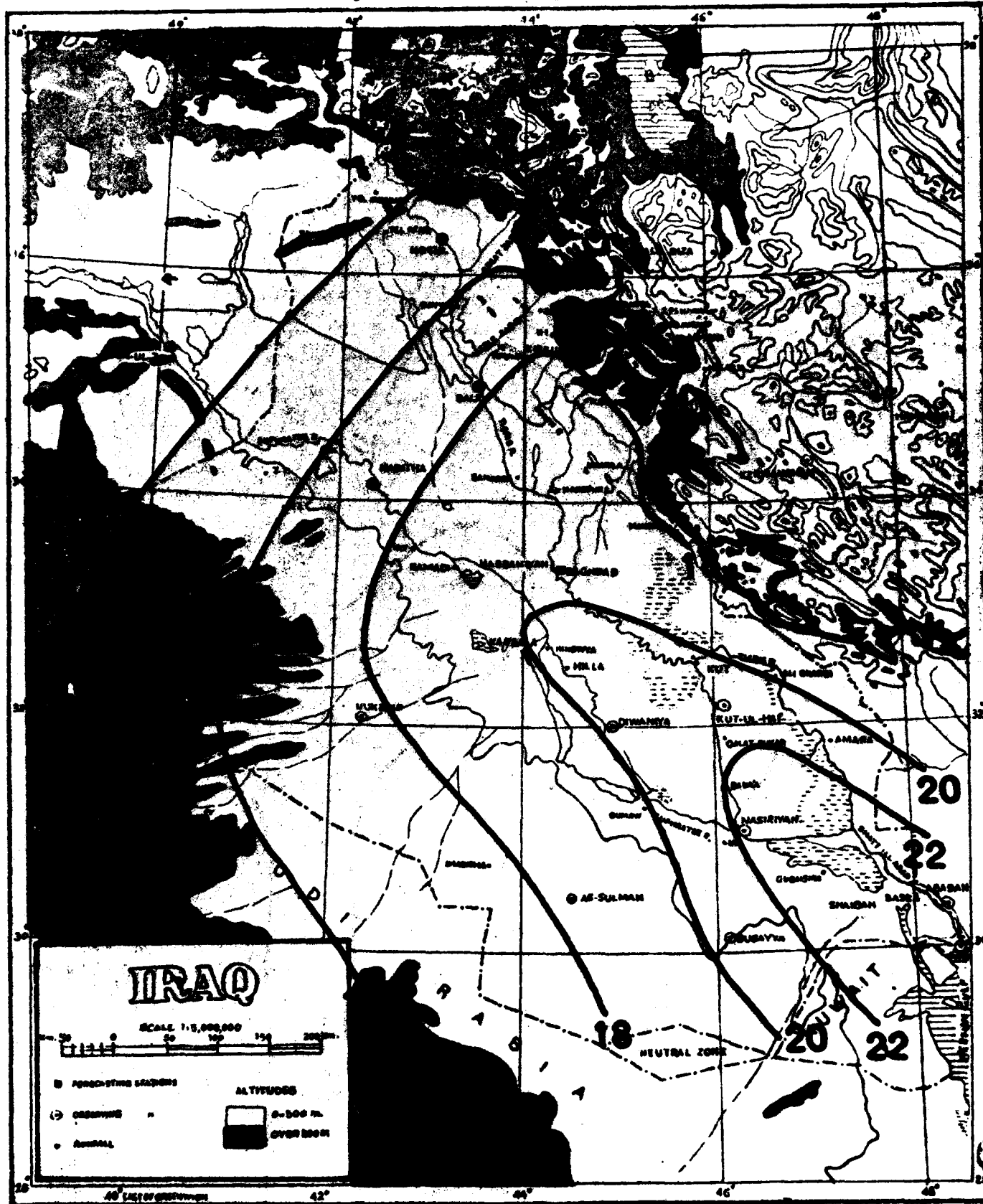
53
APRIL



TEMPERATURE

Mean Monthly Minimum (C°)
period of records see page 2/3

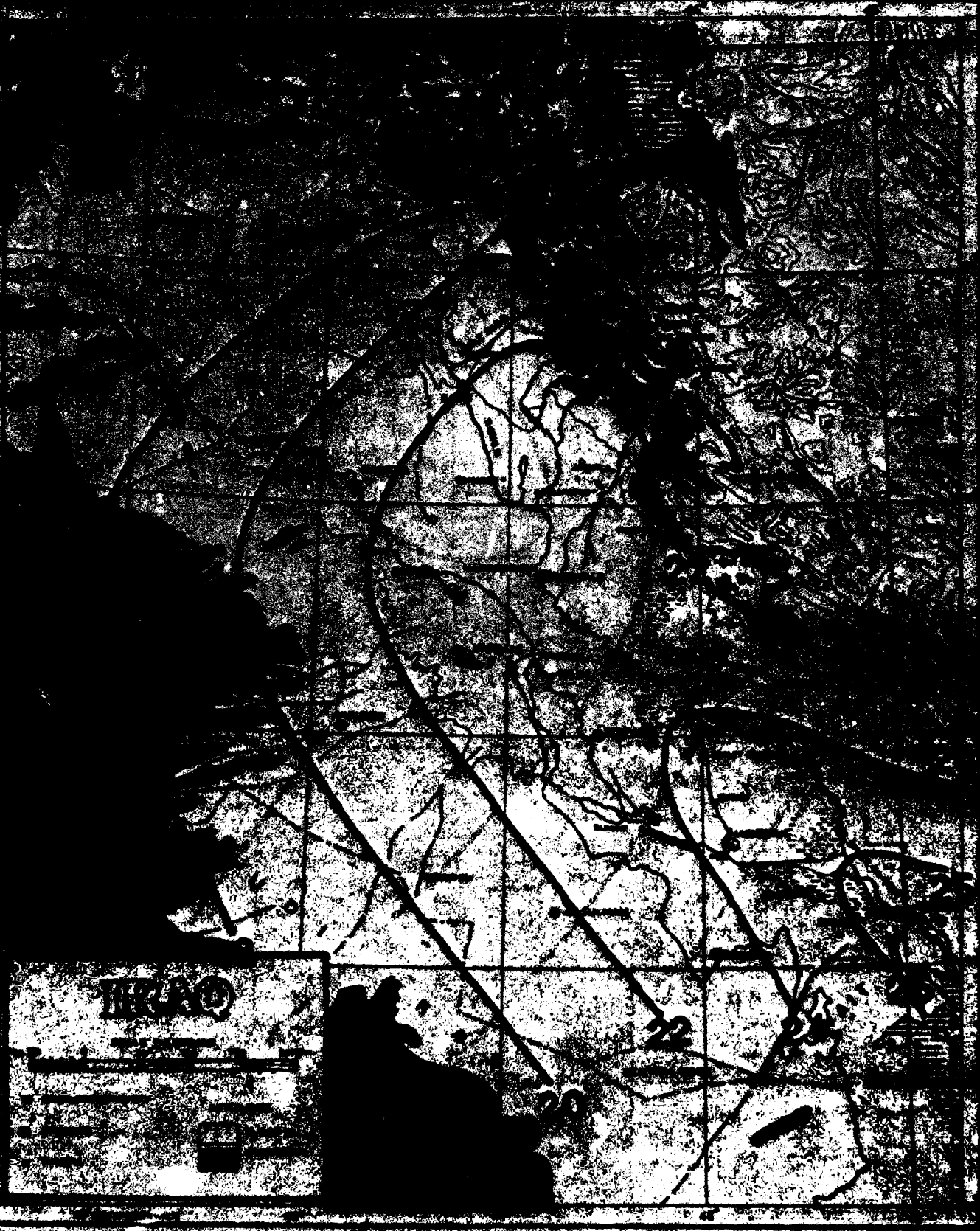
54
MAY



SURVEY PRTS. BASHMOO.

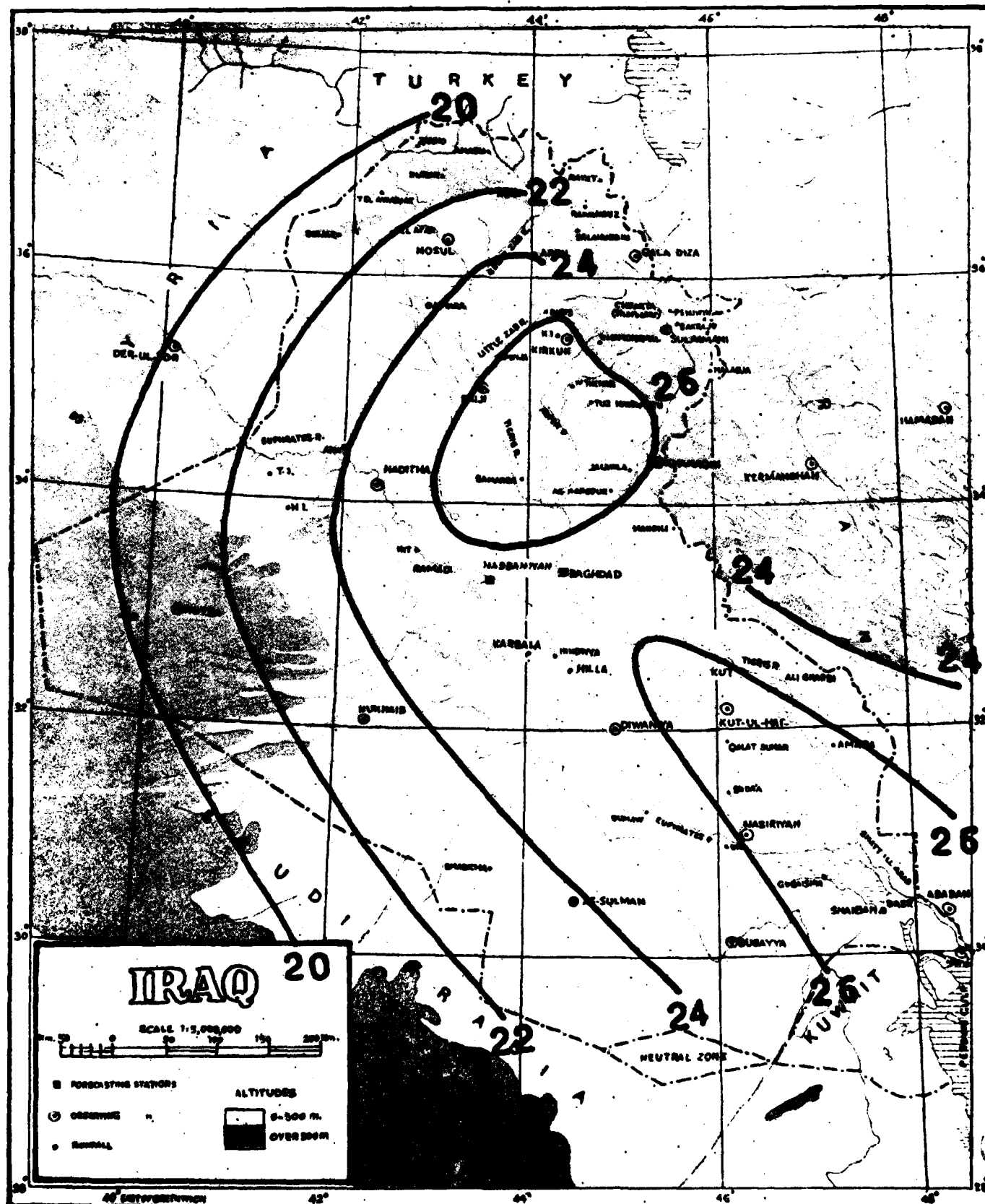
TEMPERATURE

JUNE



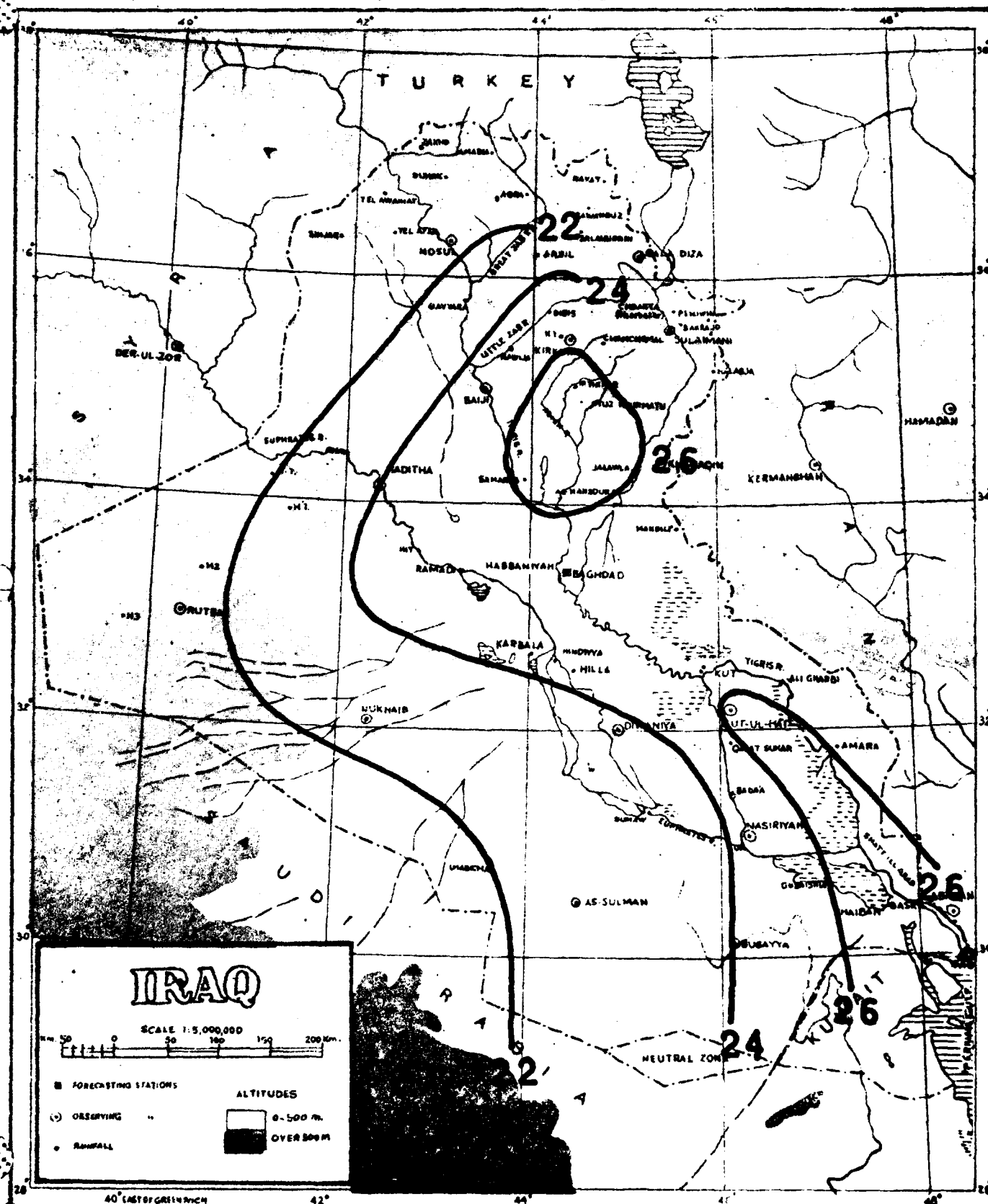
TEMPERATURE
Mean Monthly Minimum (C°)
 period of records see page 2/3

56
JULY



TEMPERATURE
Mean Monthly Minimum (C°)
period of records see page 2/3

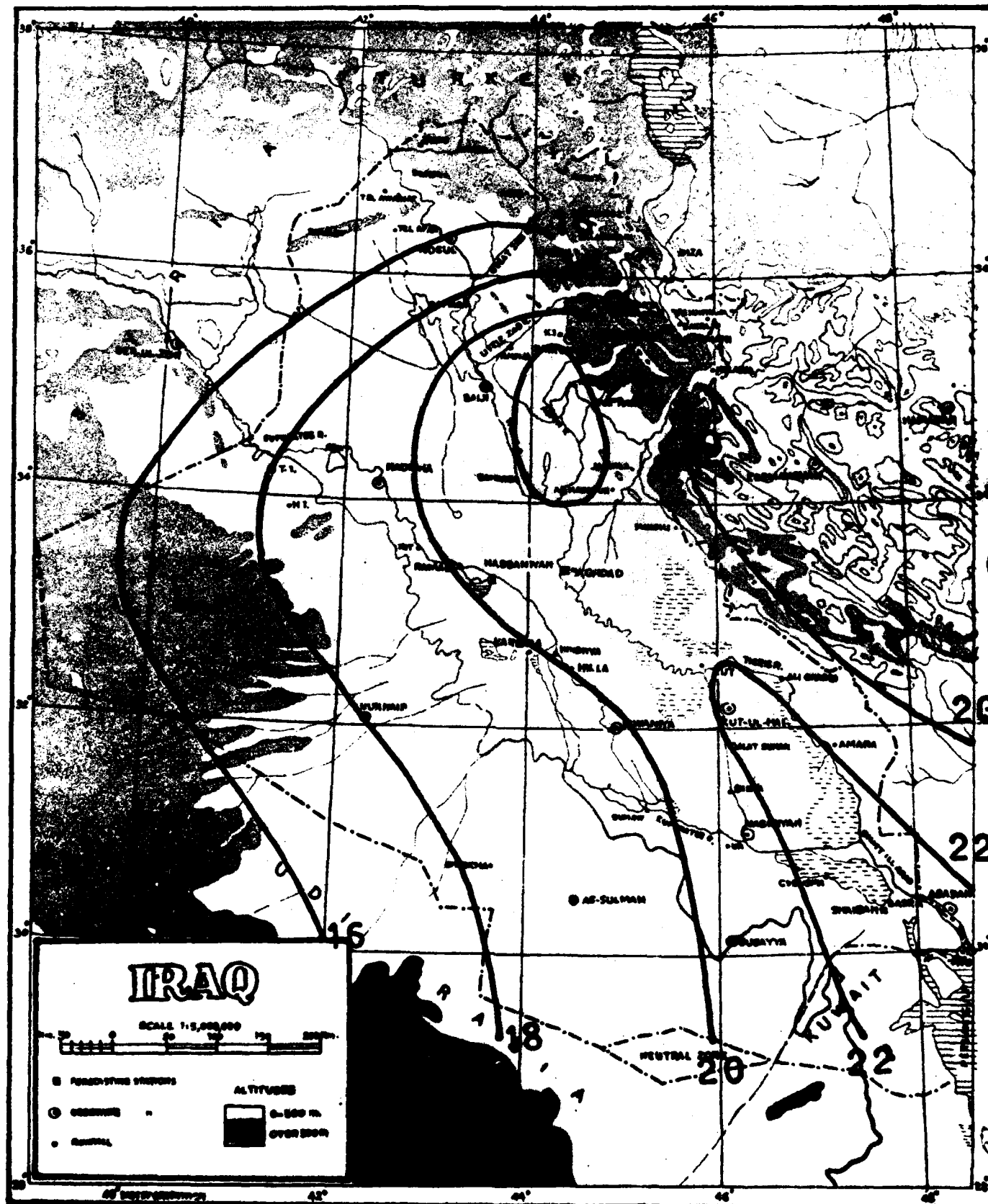
57
AUGUST



TEMPERATURE
Mean Monthly Minimum (C°)
 period of records see page 2/3

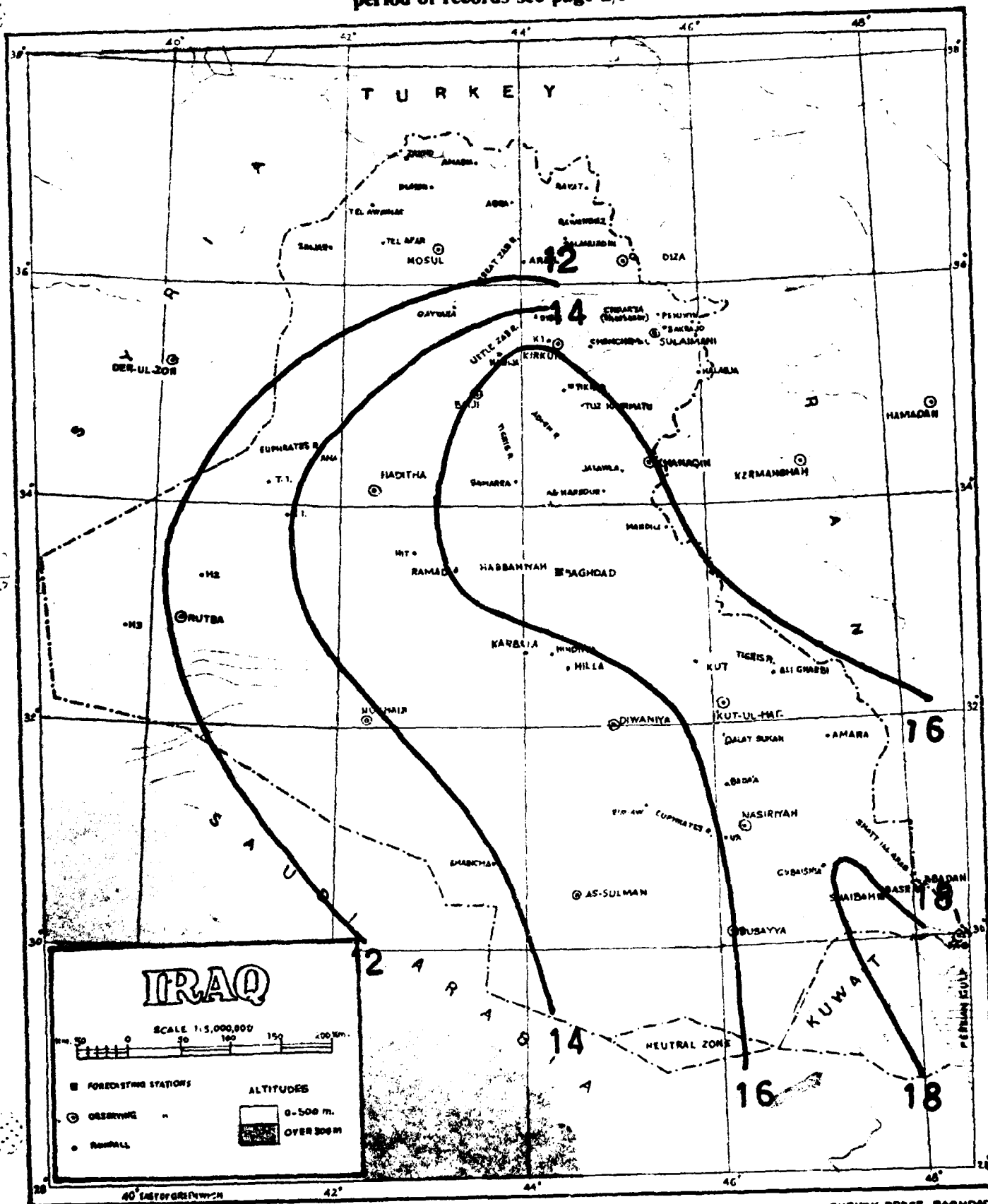
58

SEPTEMBER



TEMPERATURE Mean Monthly Minimum (C°) period of records see page 2/3

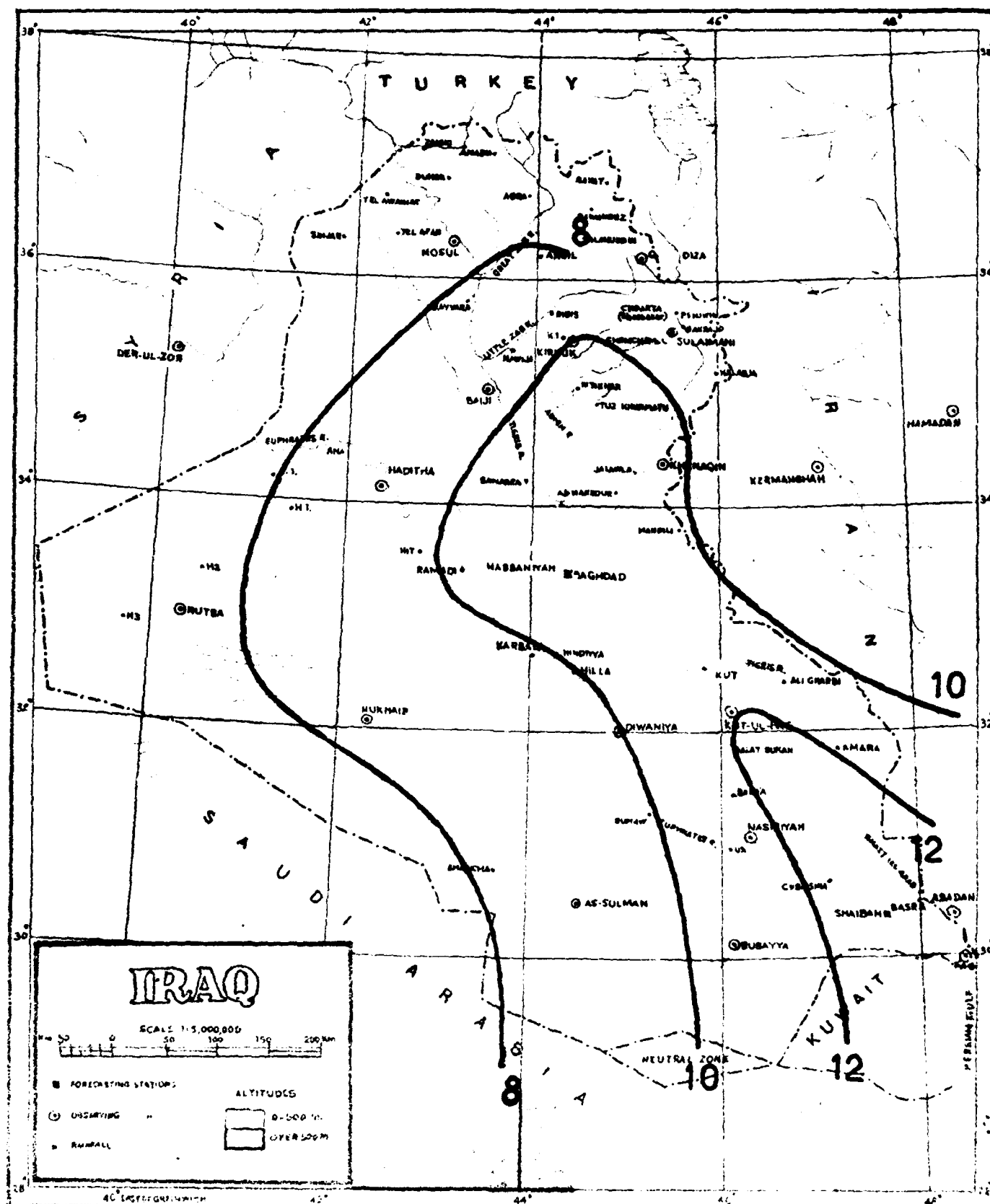
59
OCTOBER



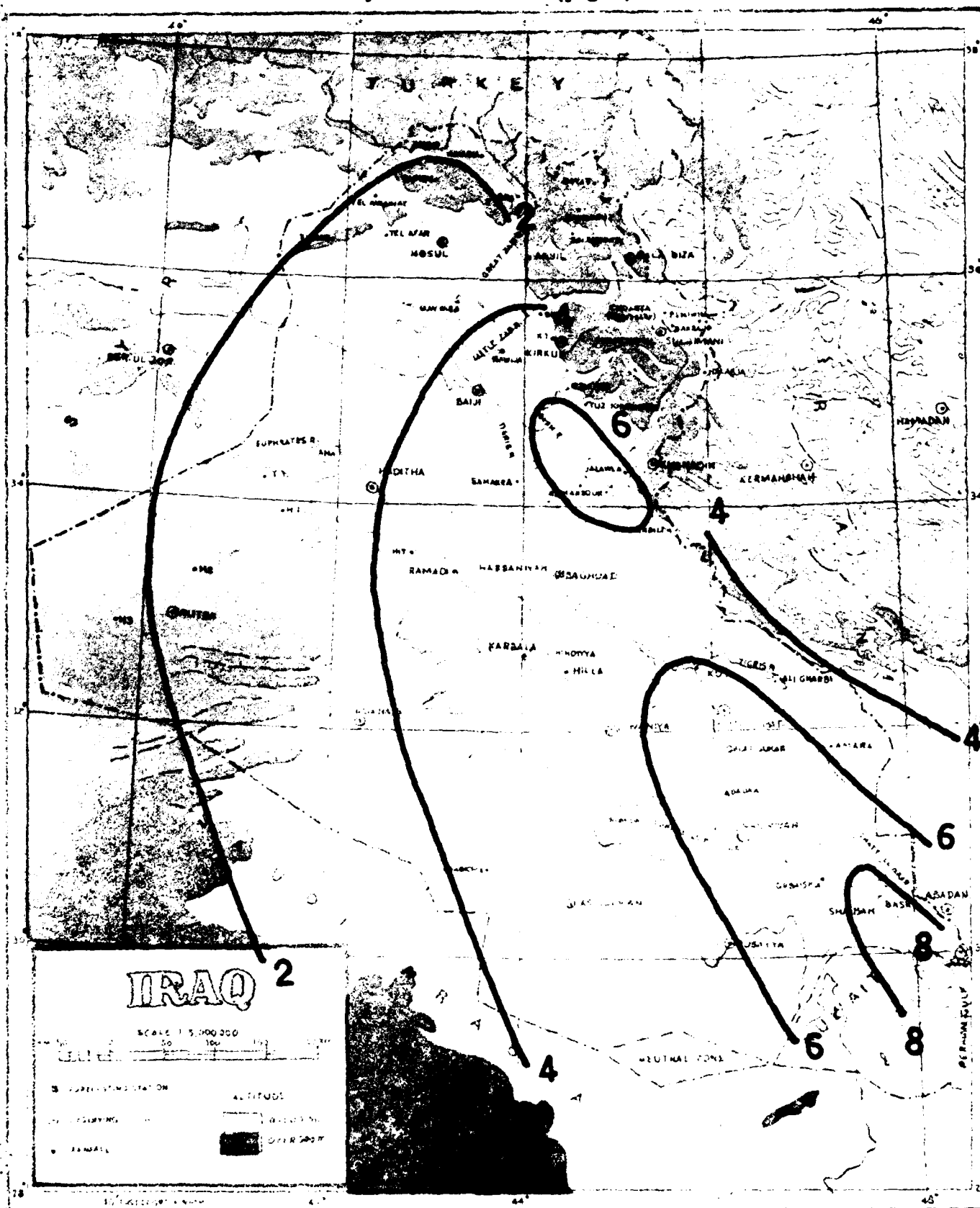
TEMPERATURE
Mean Monthly Minimum (C°)
period of records see page 2/3

60

NOVEMBER



61
DECEMBER

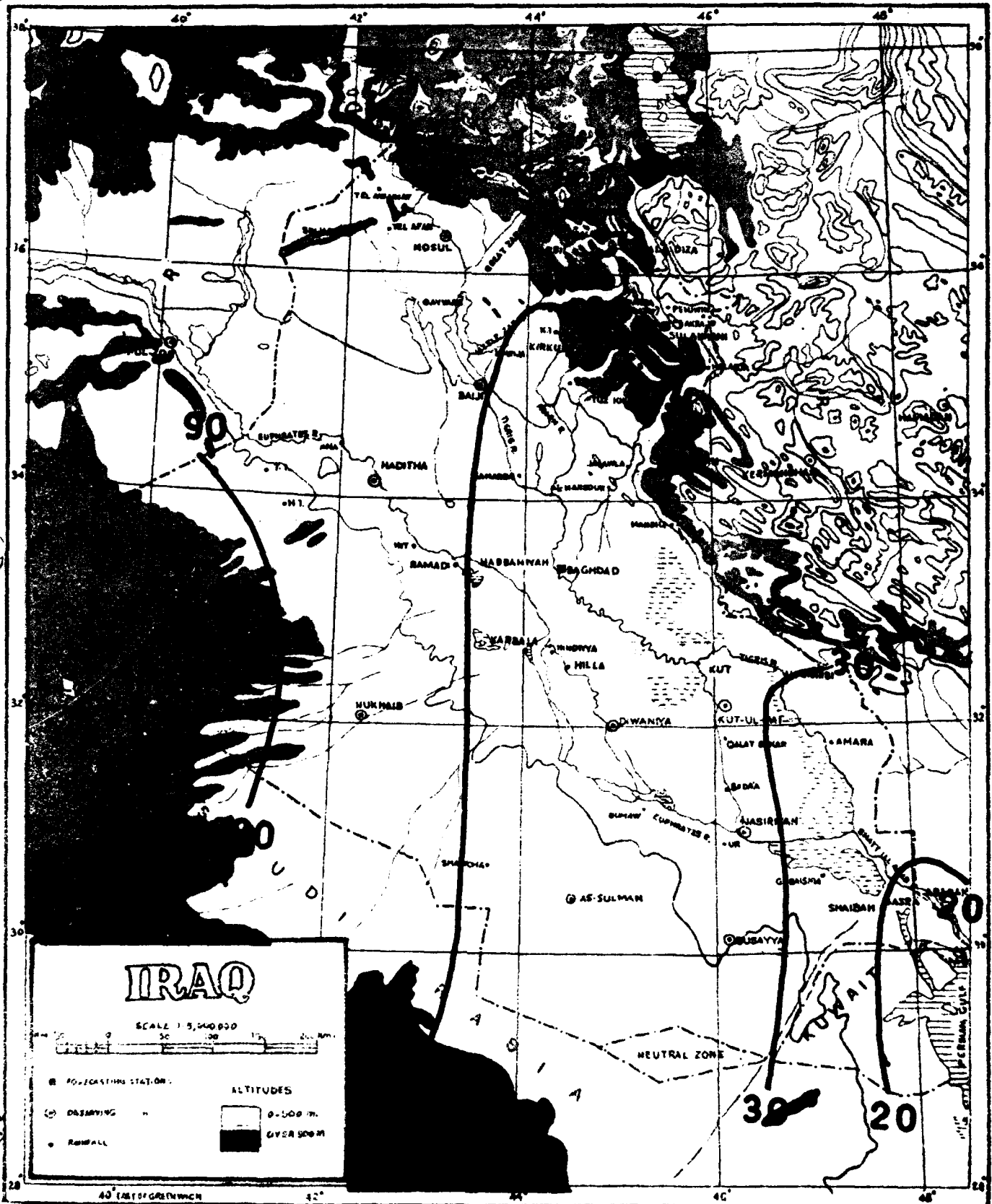


62



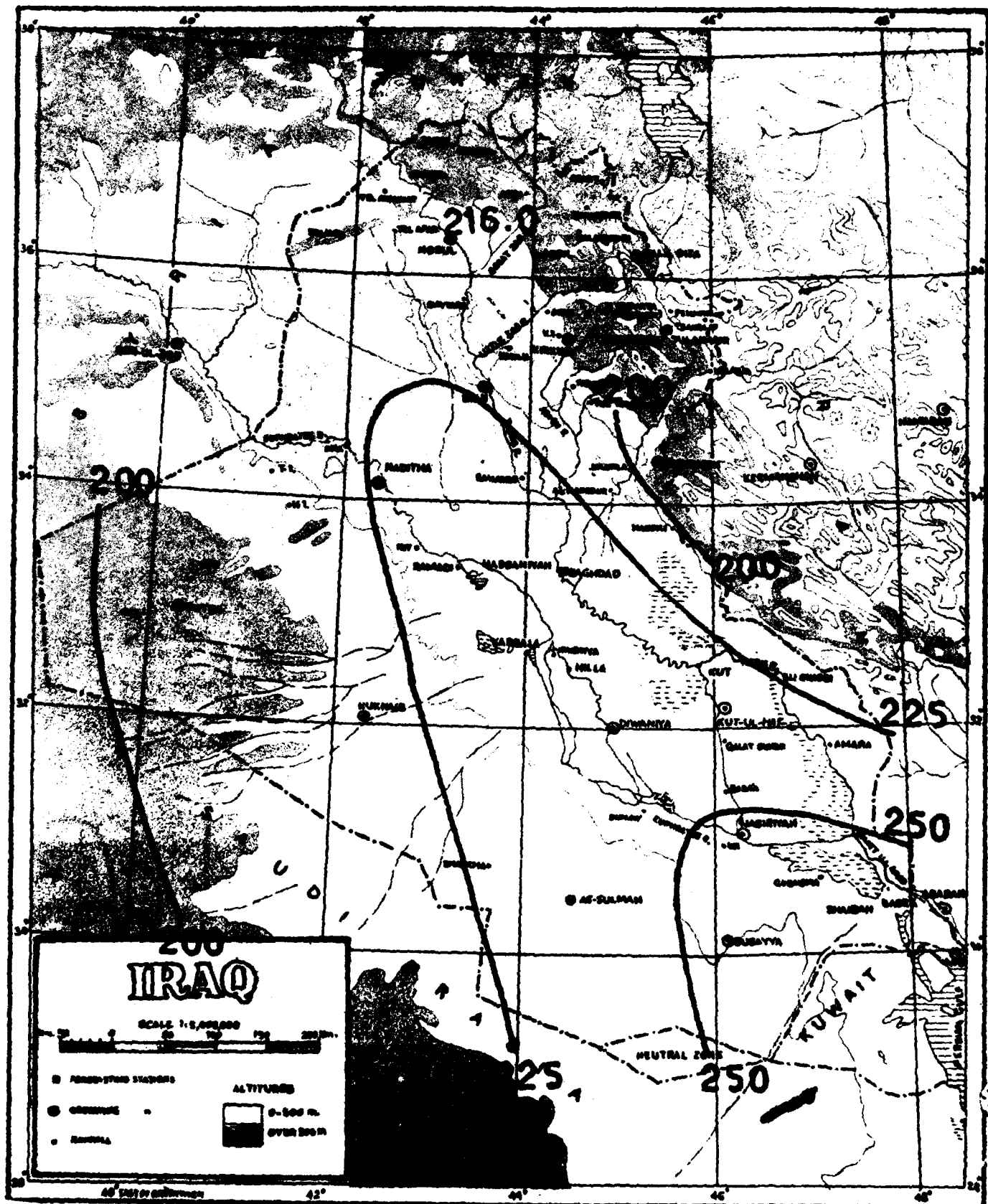
TEMPERATURE

Mean Annual Number of Days with Minimum Temperature 5 C° or Less
period of records see page 2/3



TEMPERATURE

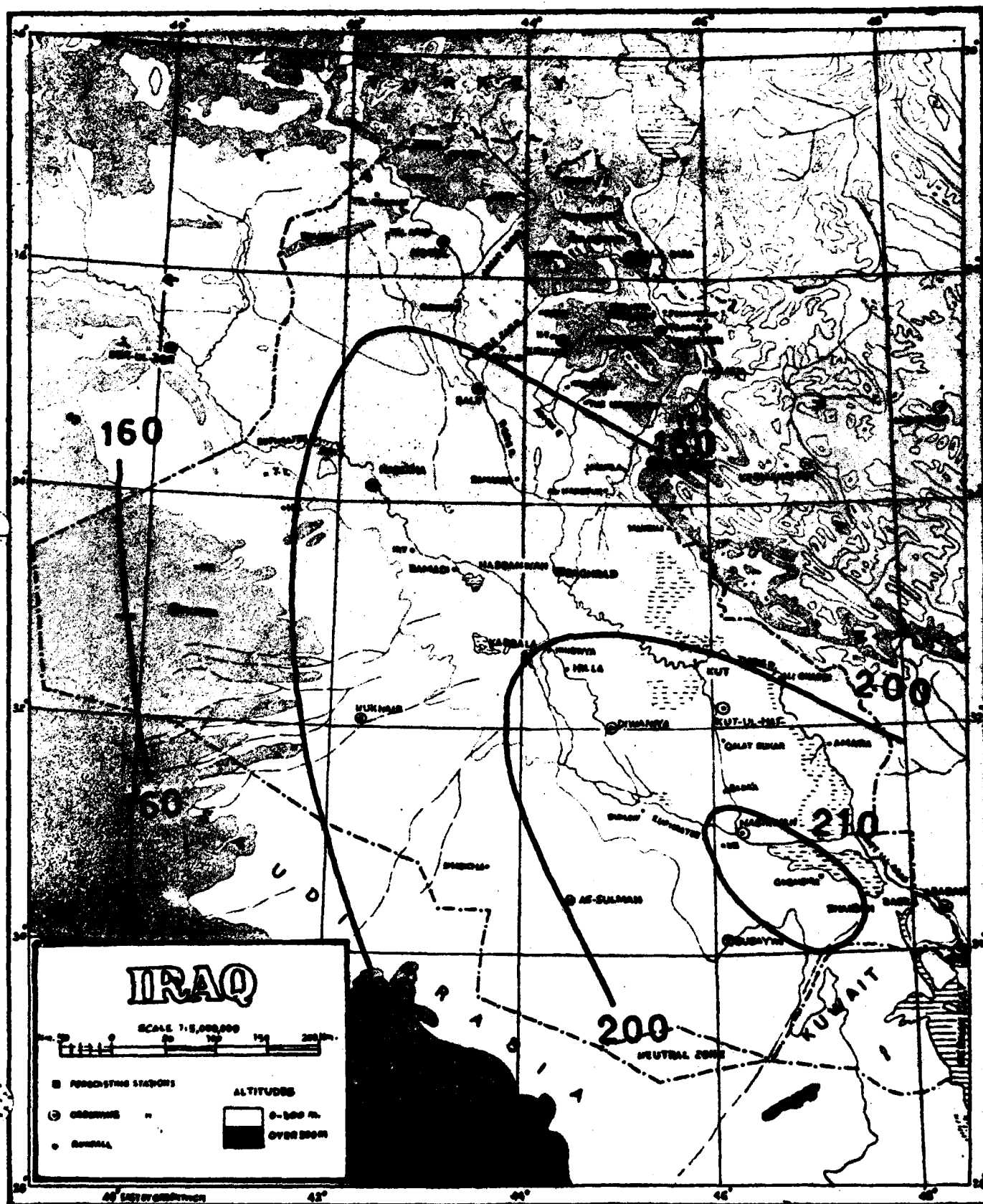
Mean Annual Number of Days with Maximum Temperature 25 C° or More
period of records see page 2/3



TEMPERATURE

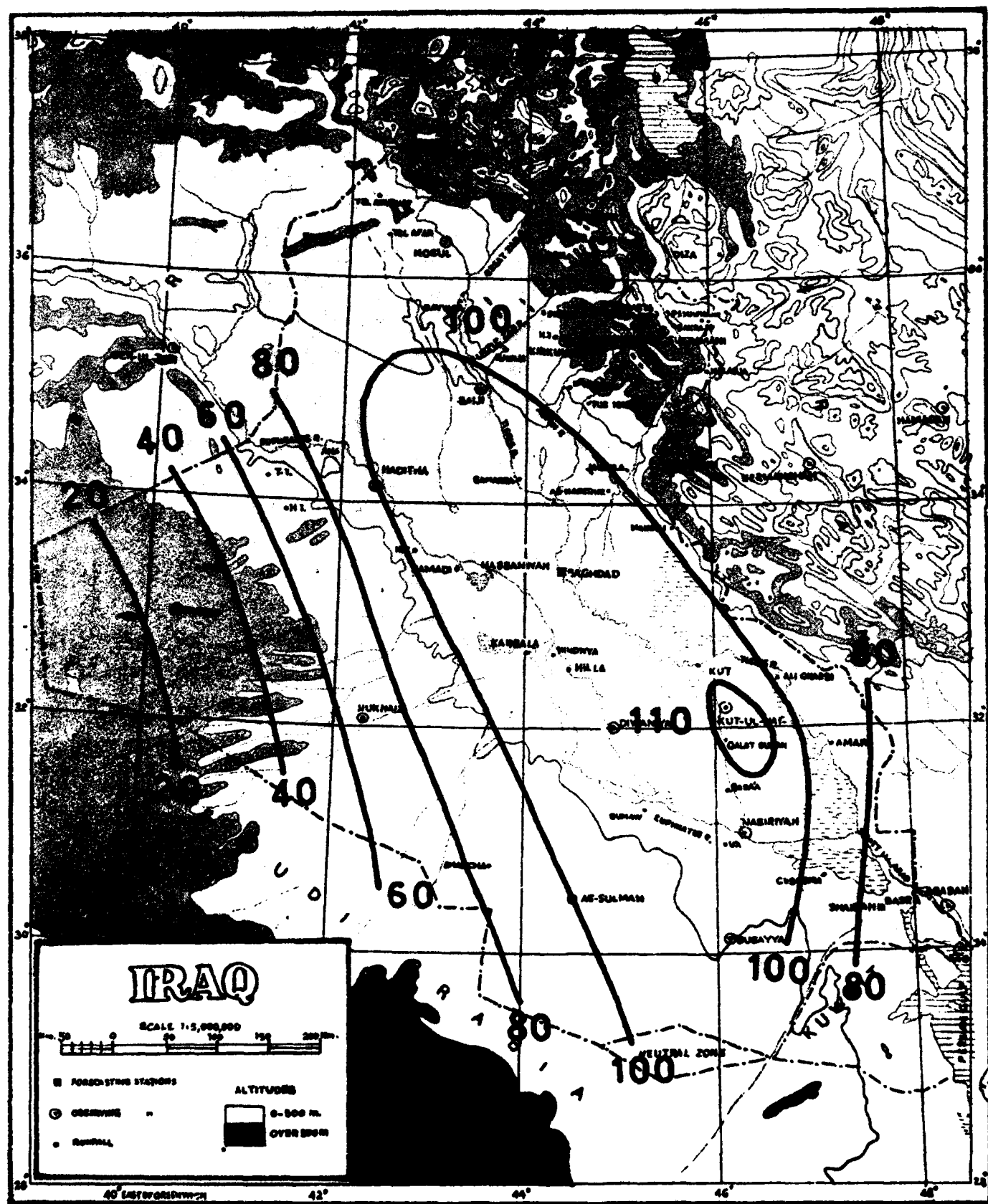
65

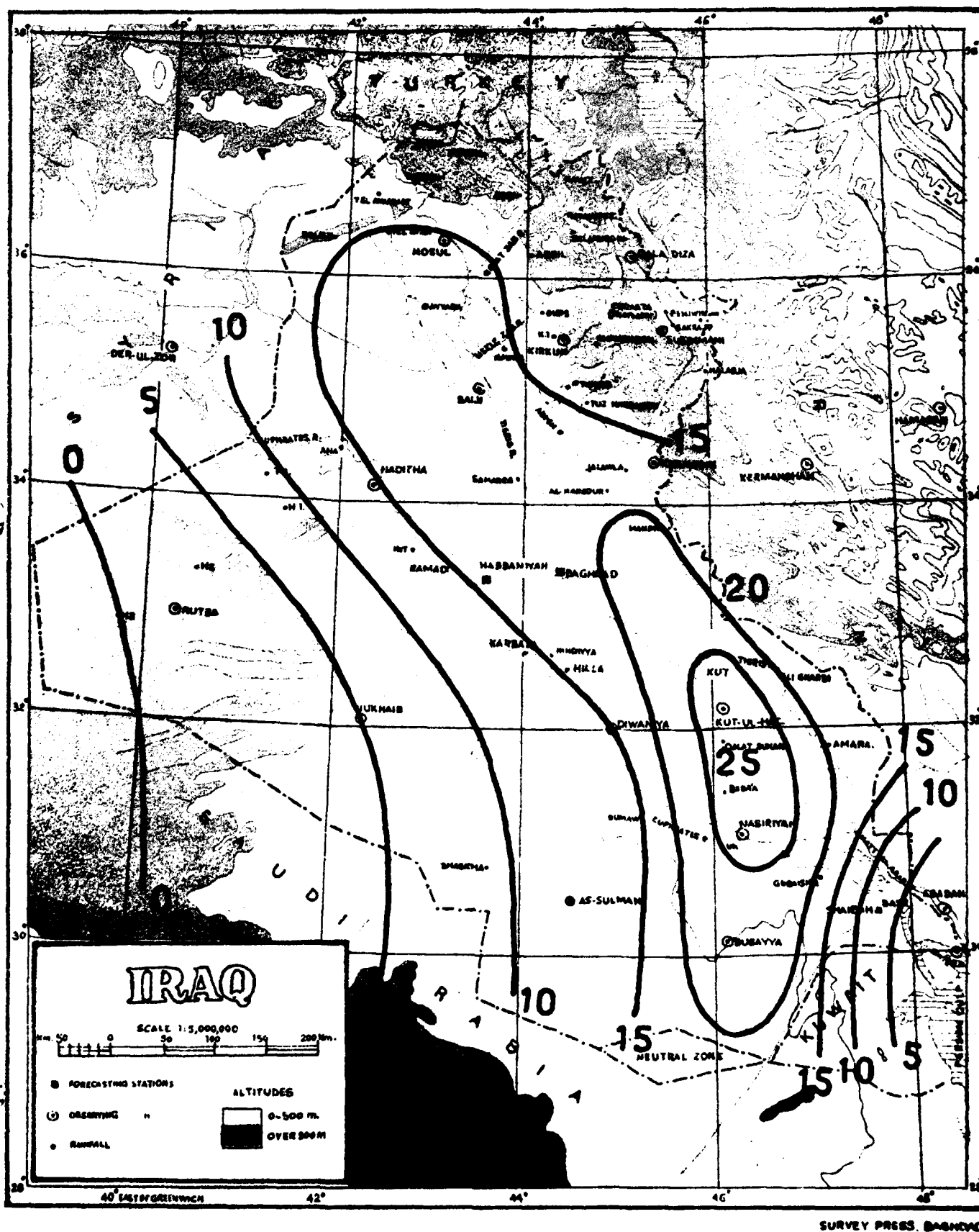
Mean Annual Number of Days with Maximum Temperature 30 C or More
period of records see page 2/3



TEMPERATURE

Mean Annual Number of Days with Maximum Temperature 40 C° or More
period of records see page 2/3



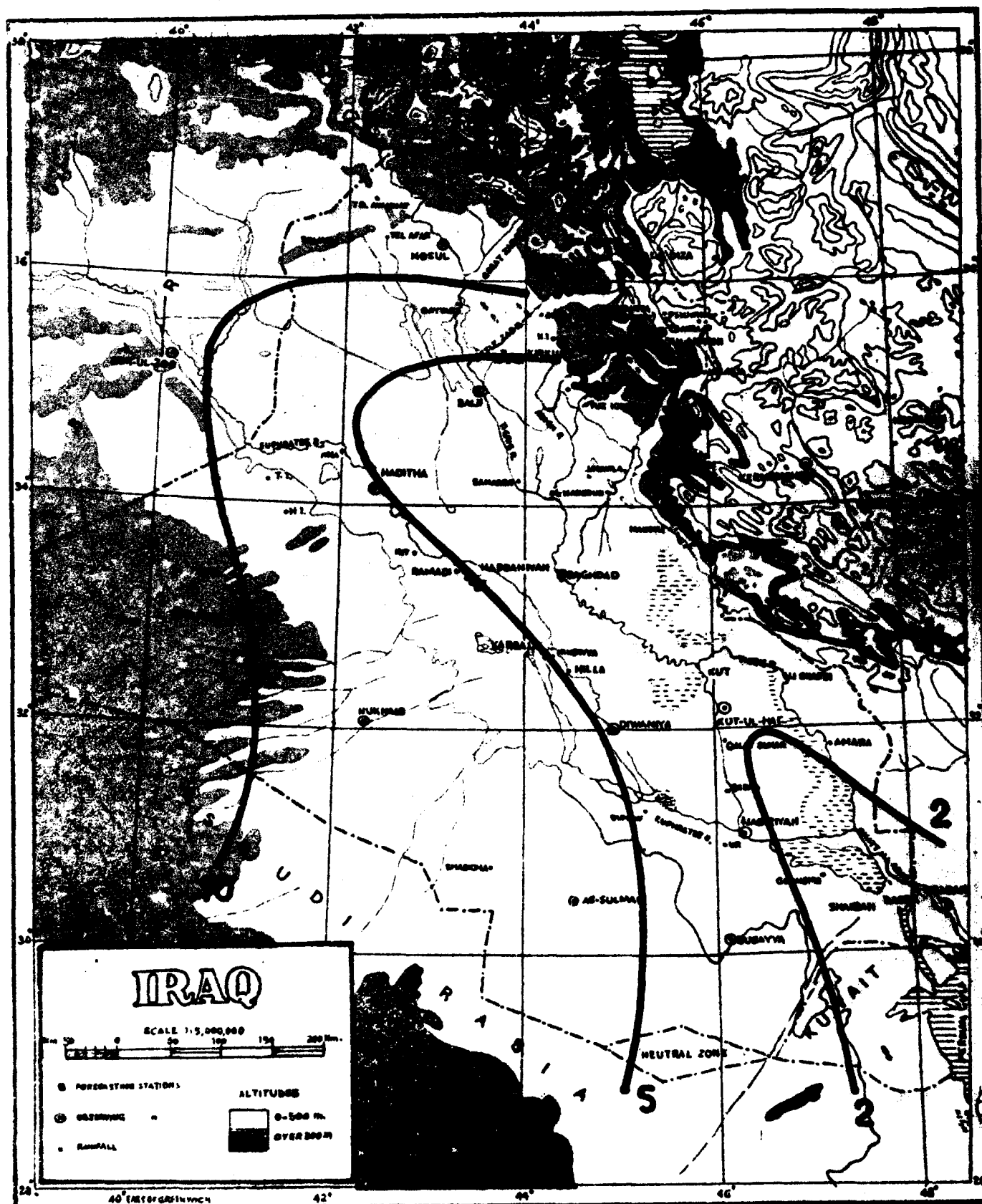


68

TEMPERATURE

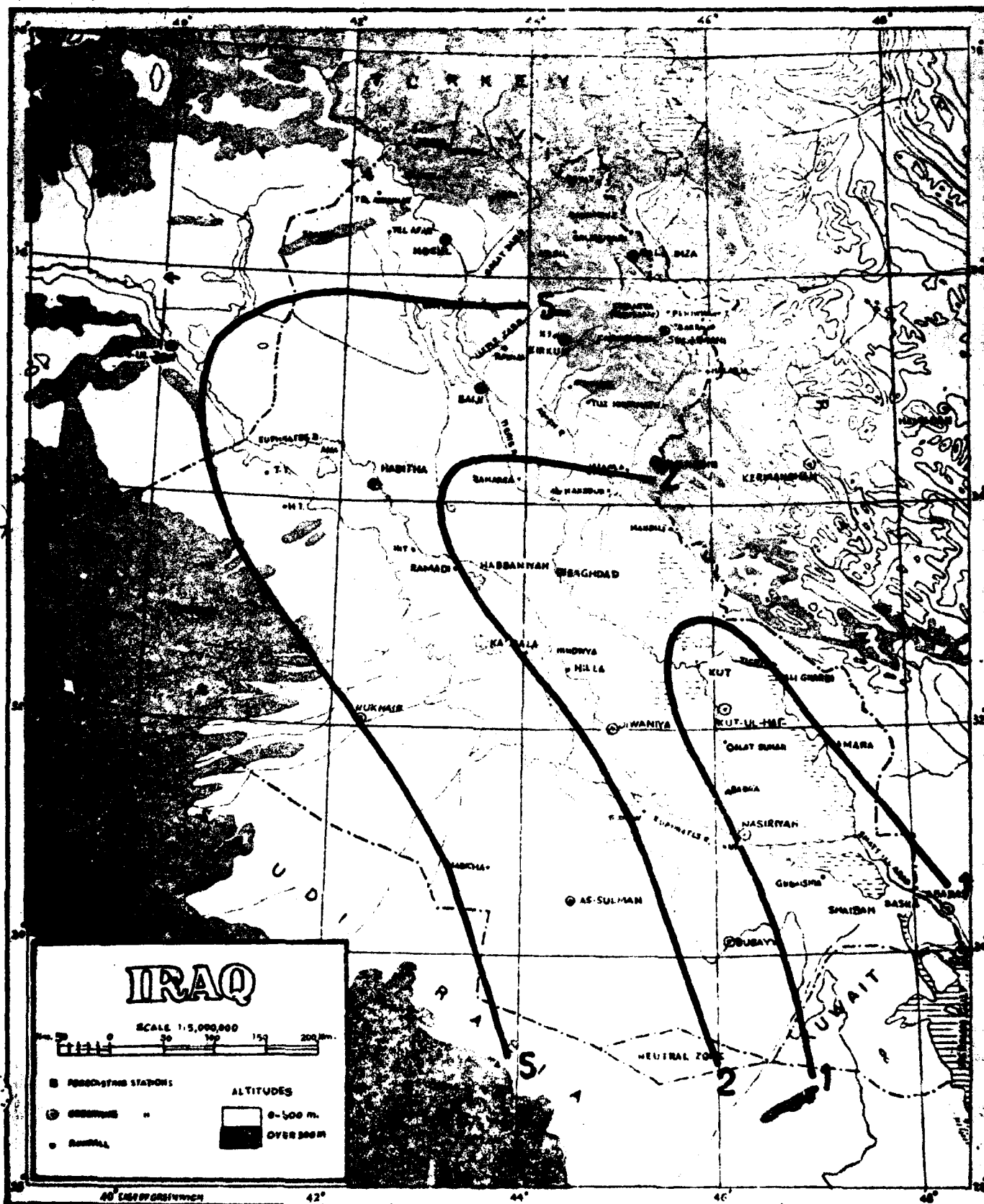
Mean Monthly Number of Days with Minimum Temperature $\leq 0^{\circ}\text{C}$ or Less
period of records see page 2/3

JANUARY



TEMPERATURE
Mean Monthly Number of Days with Minimum Temperature $\leq 0^{\circ}\text{C}$ or Less
 period of records see page 2/3

FEBRUARY

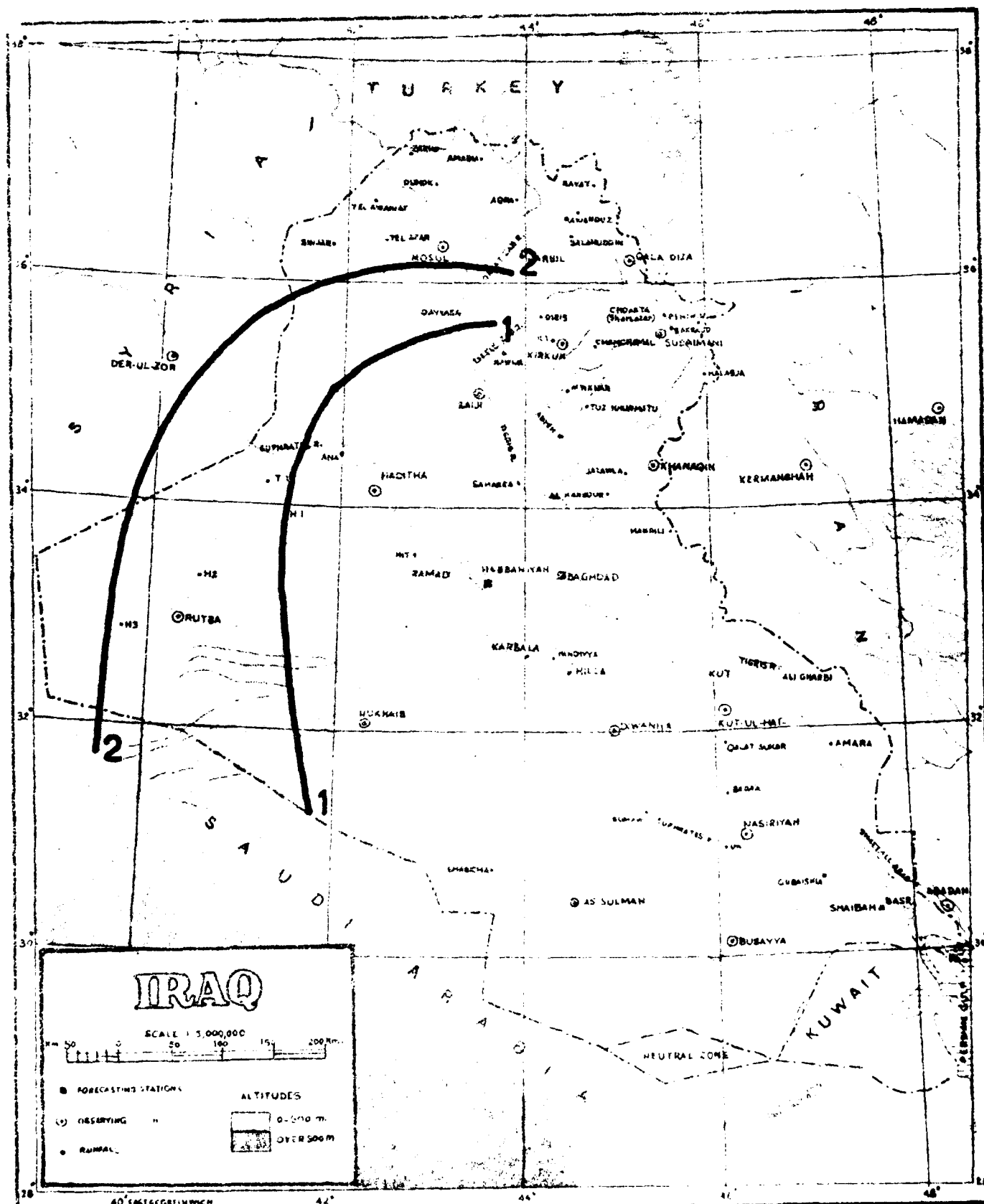


70

TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 0 C° or Less
period of records see page 2/3

MARCH





7

DECEMBER

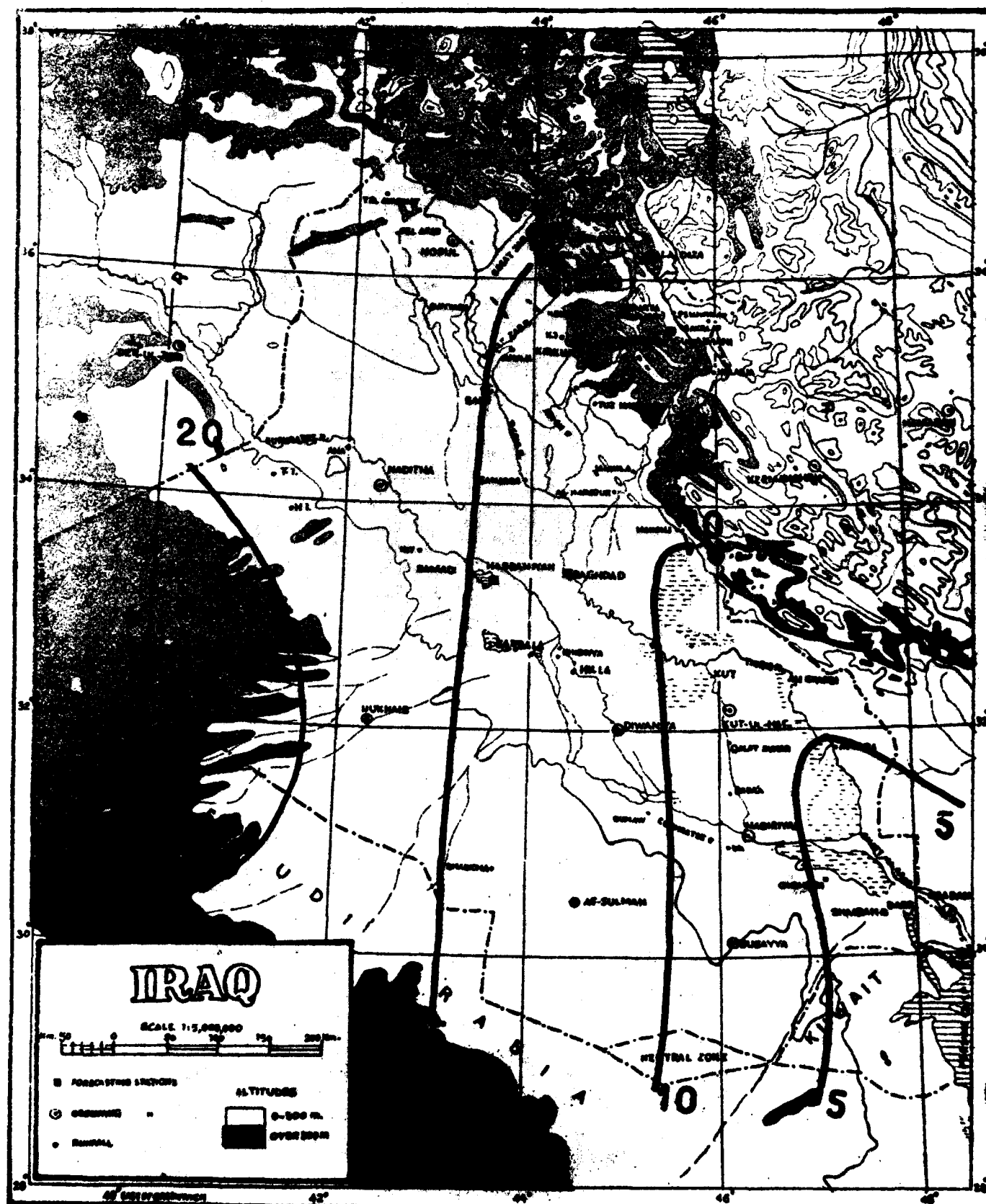


TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5 C° or Less
period of records see page 2/3

74

FEBRUARY

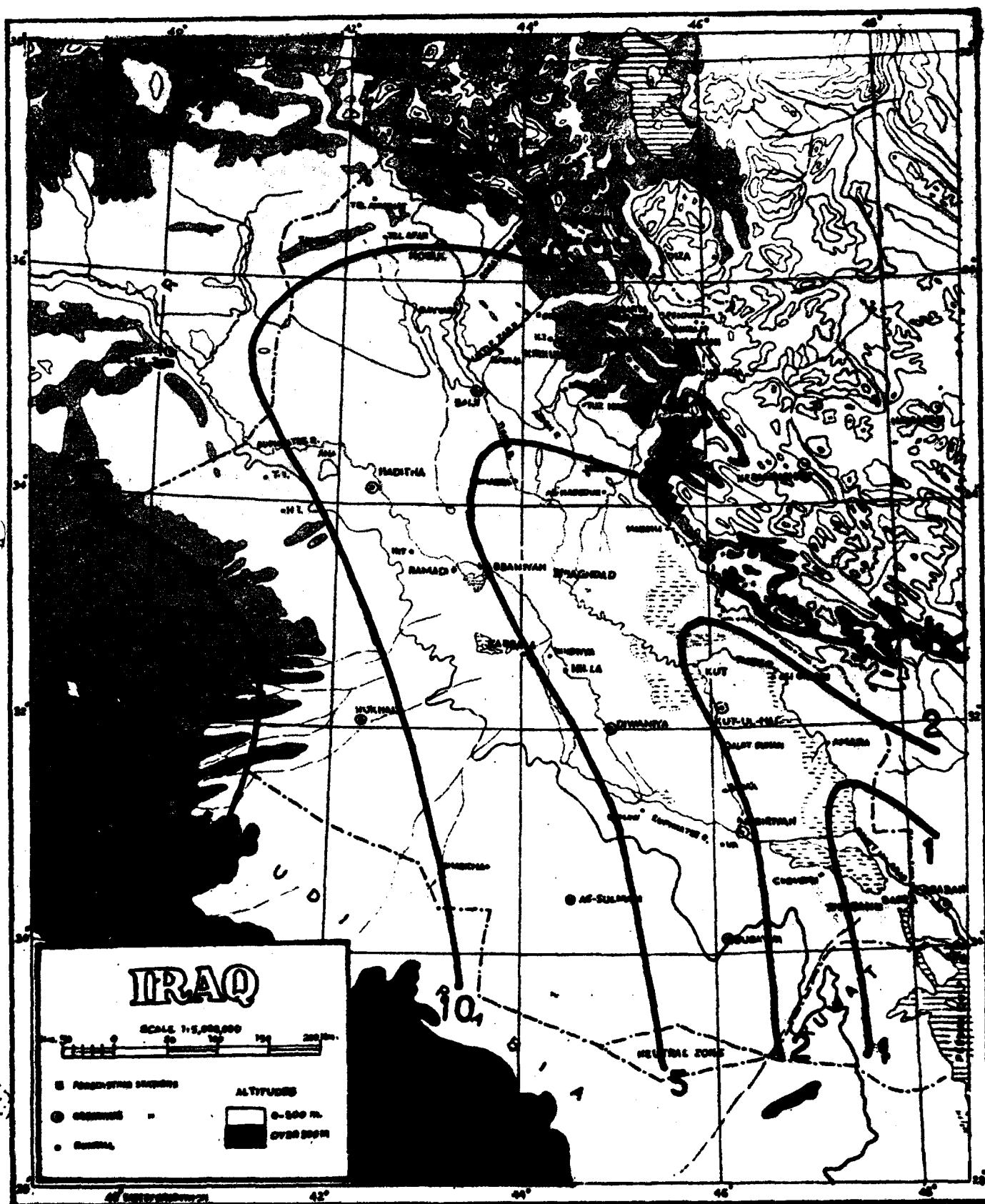


75

TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5 C° or Less
period of records see page 2/3

MARCH

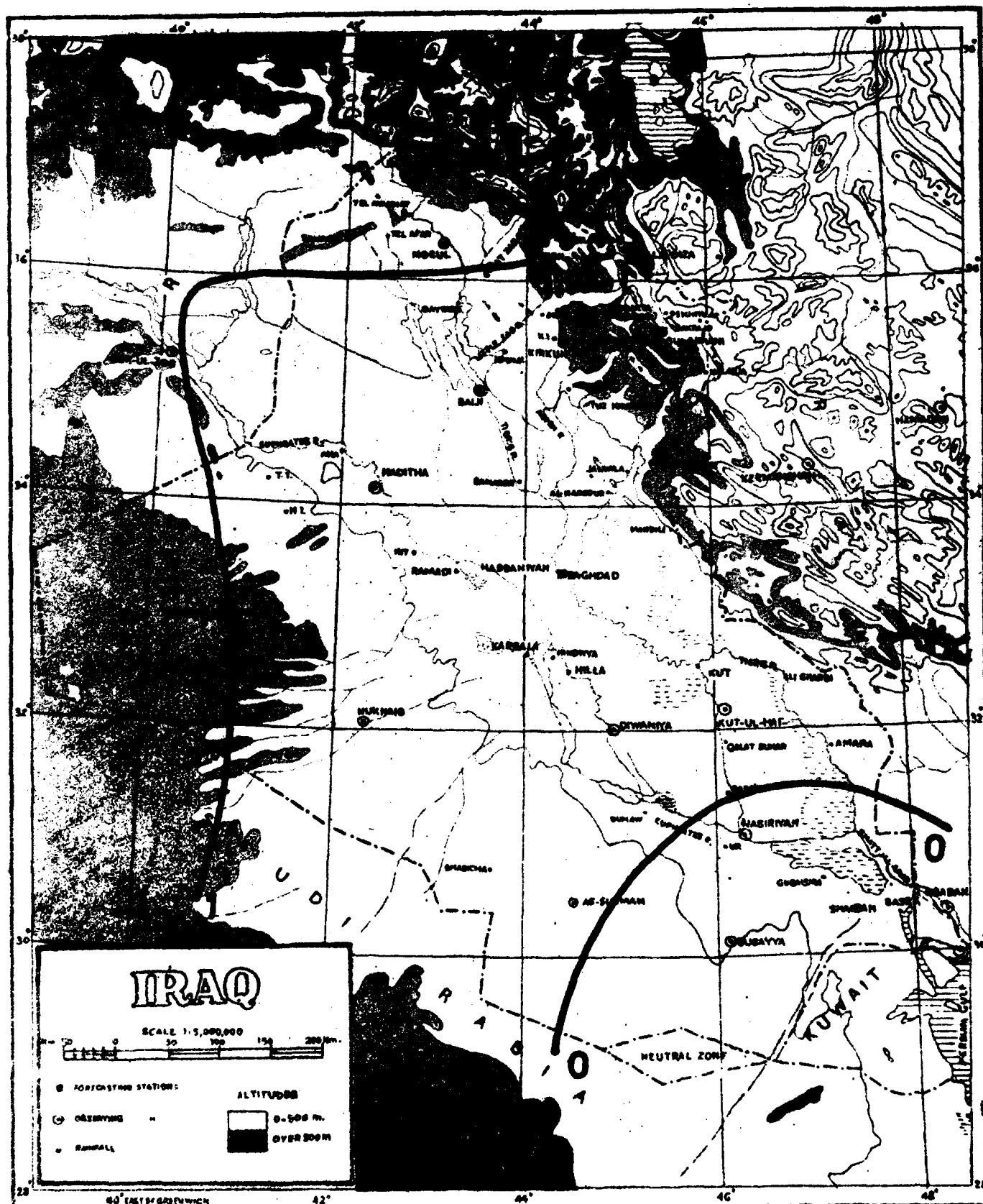


TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5°C or Less
period of records see page 2/3

76

APRIL

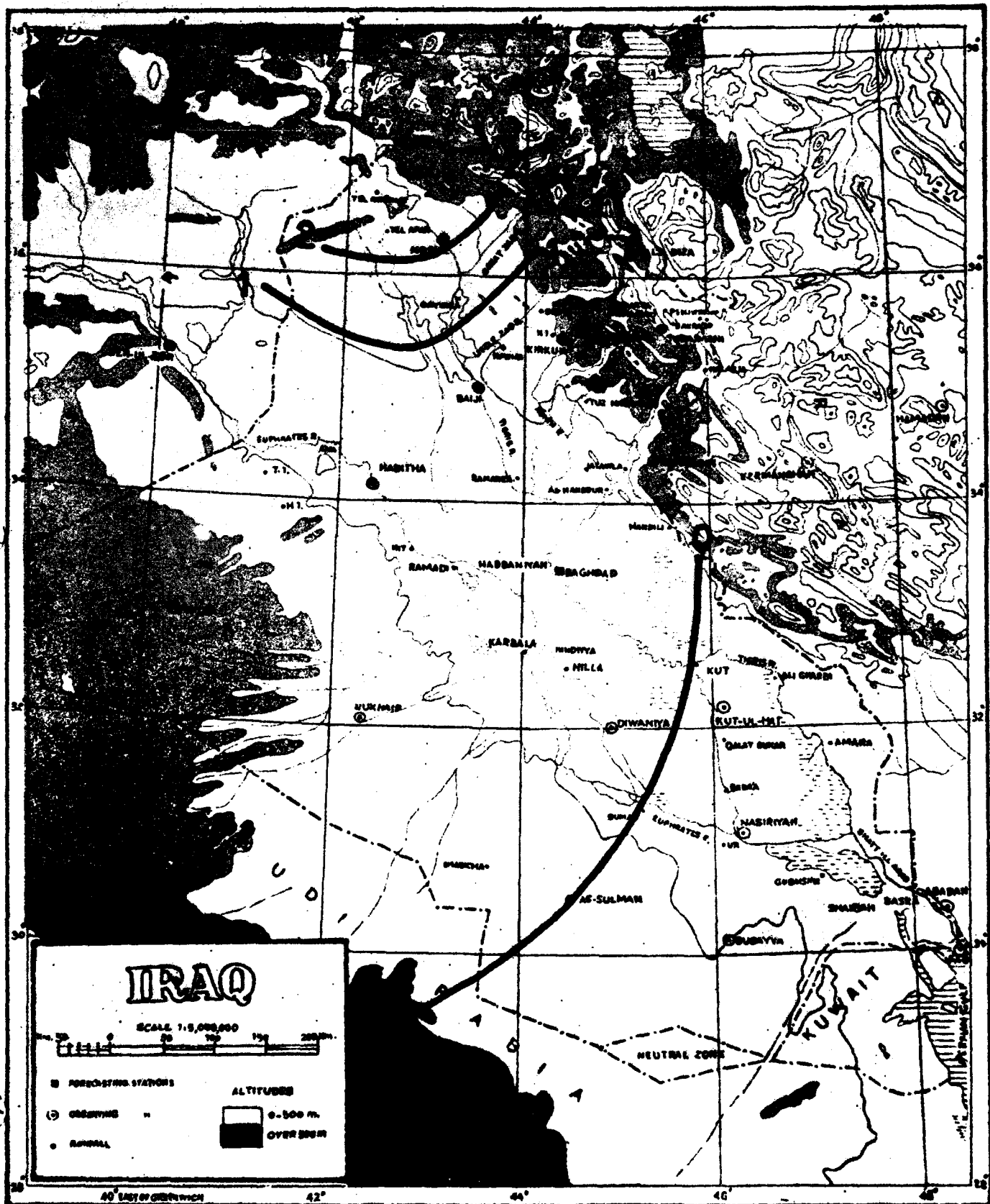


77

TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5°C or Less
period of records see page 2/3

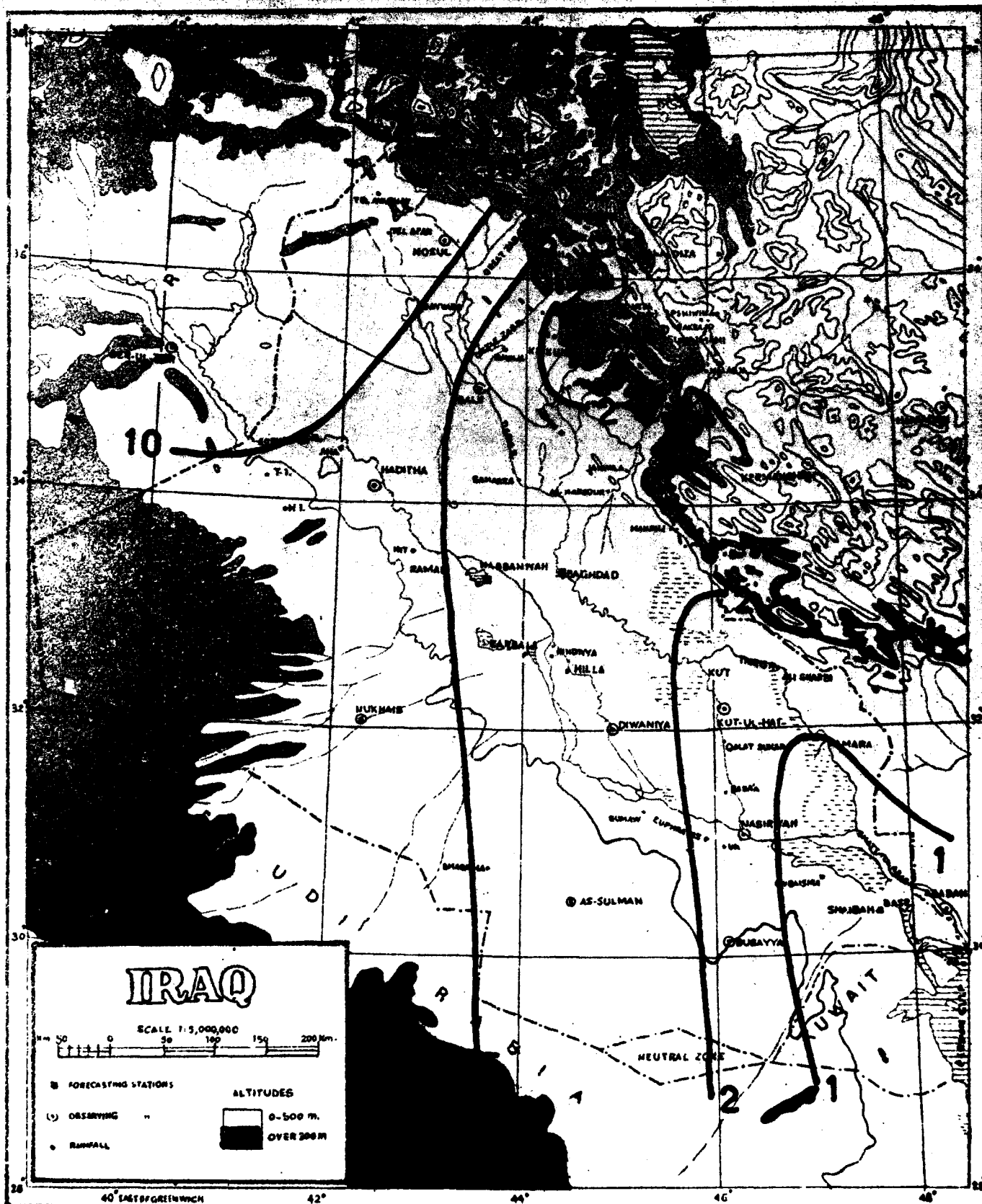
OCTOBER



TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5°C or Less
period of records see page 2/3

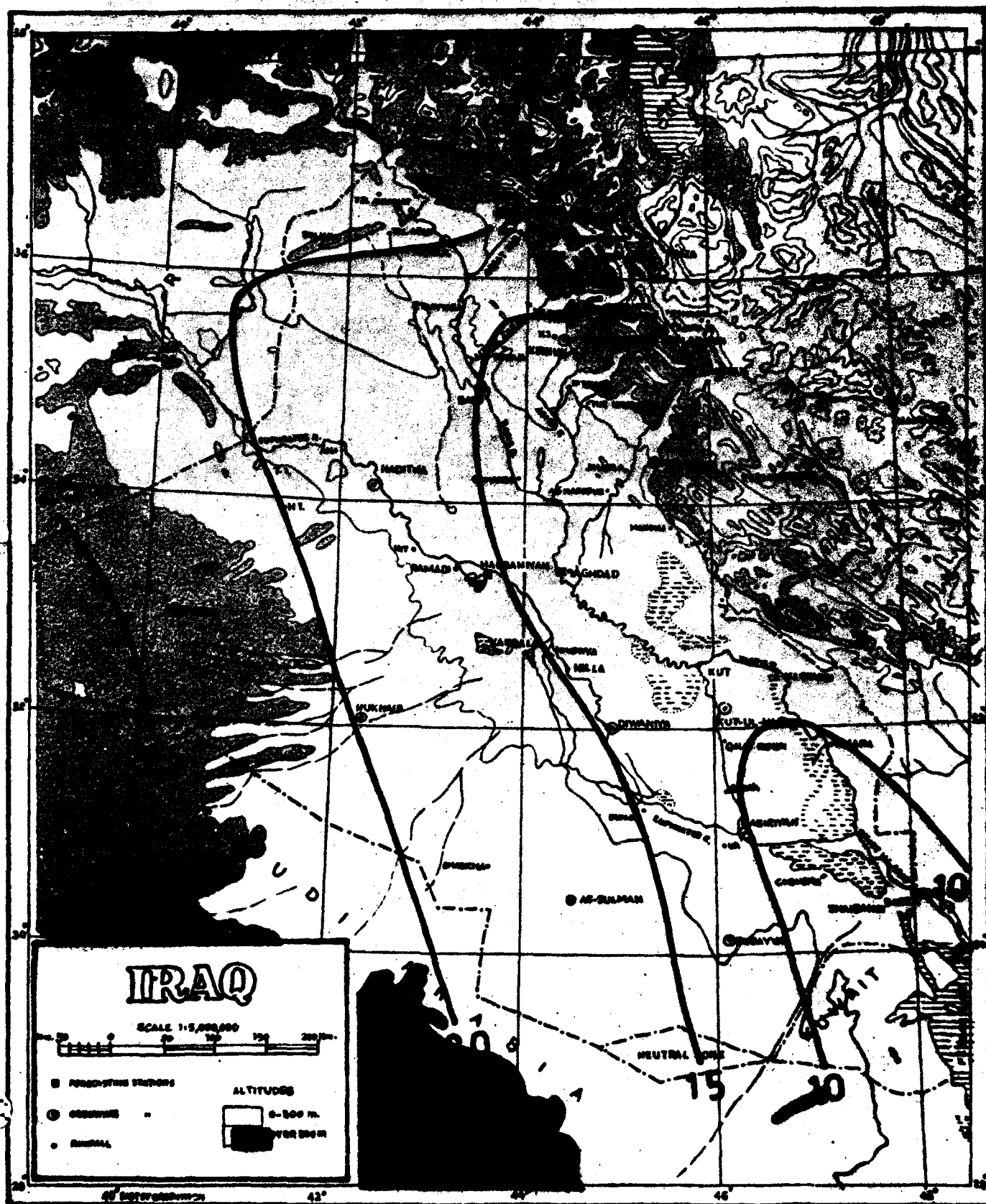
NOVEMBER



TEMPERATURE

Mean Monthly Number of Days with Minimum Temperature 5C or Less
period of records see page 2/3

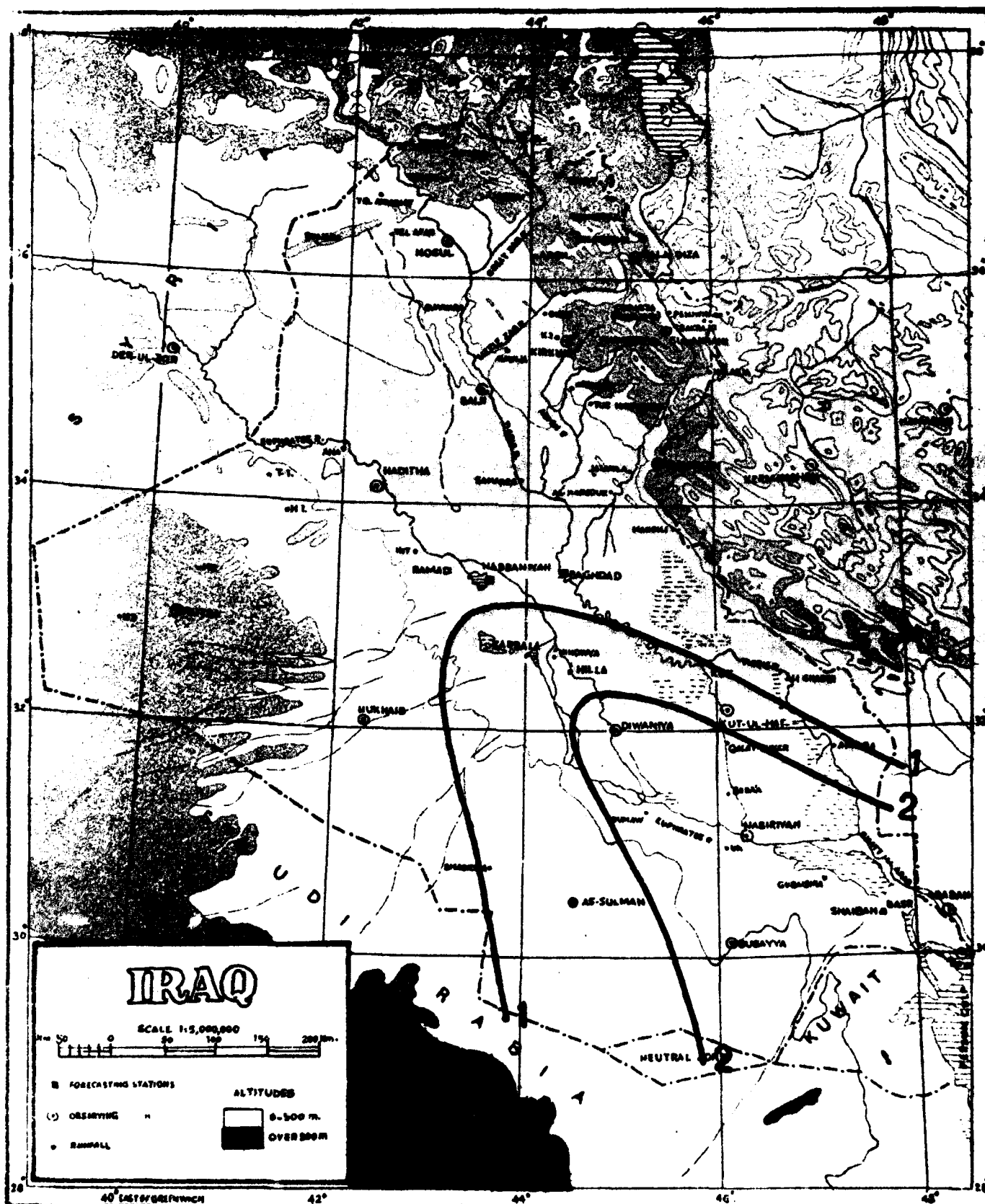
DECEMBER



TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25°C or More
period of records see page 2/3

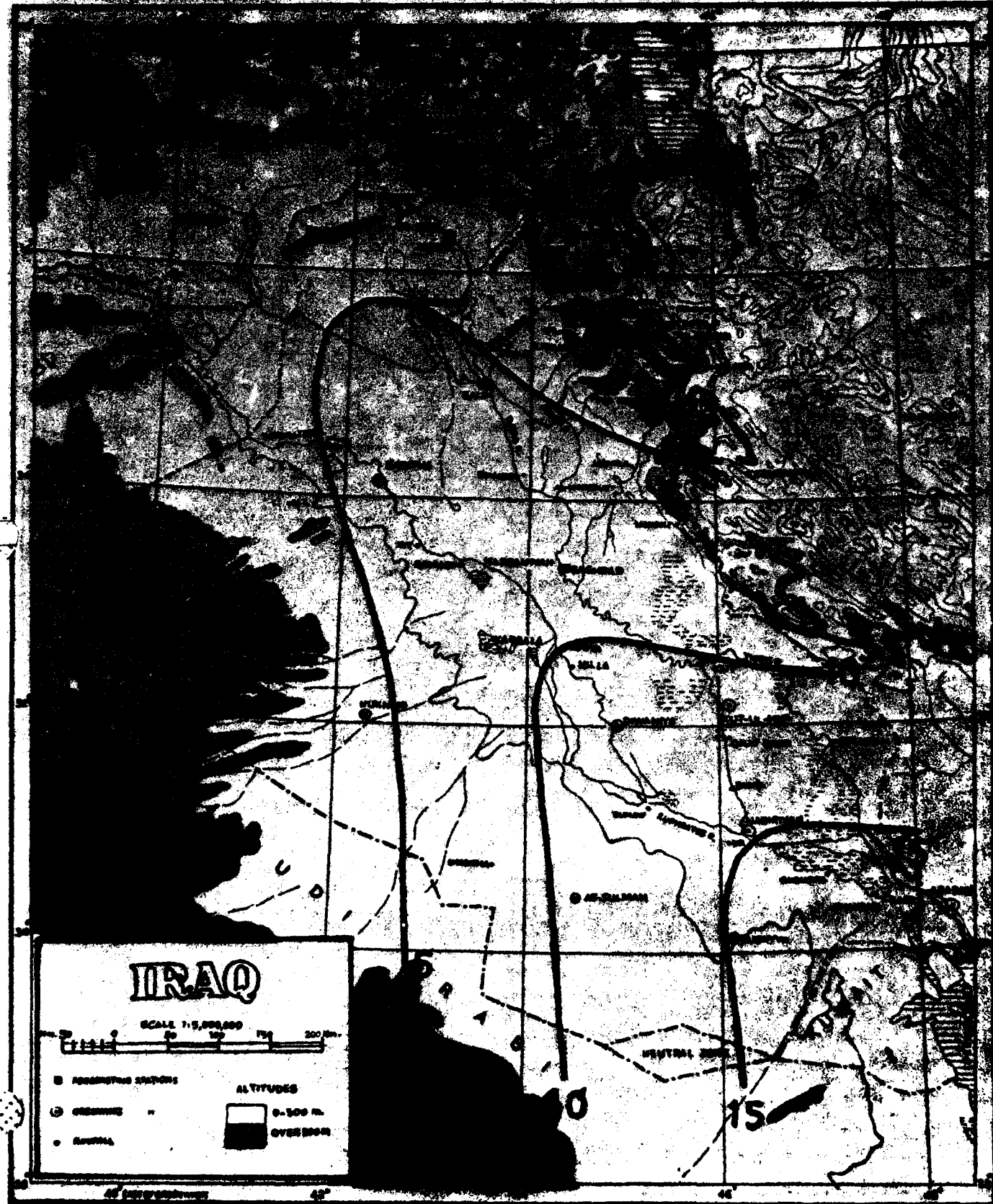
FEBRUARY



TEMPERATURE

2

MARCH

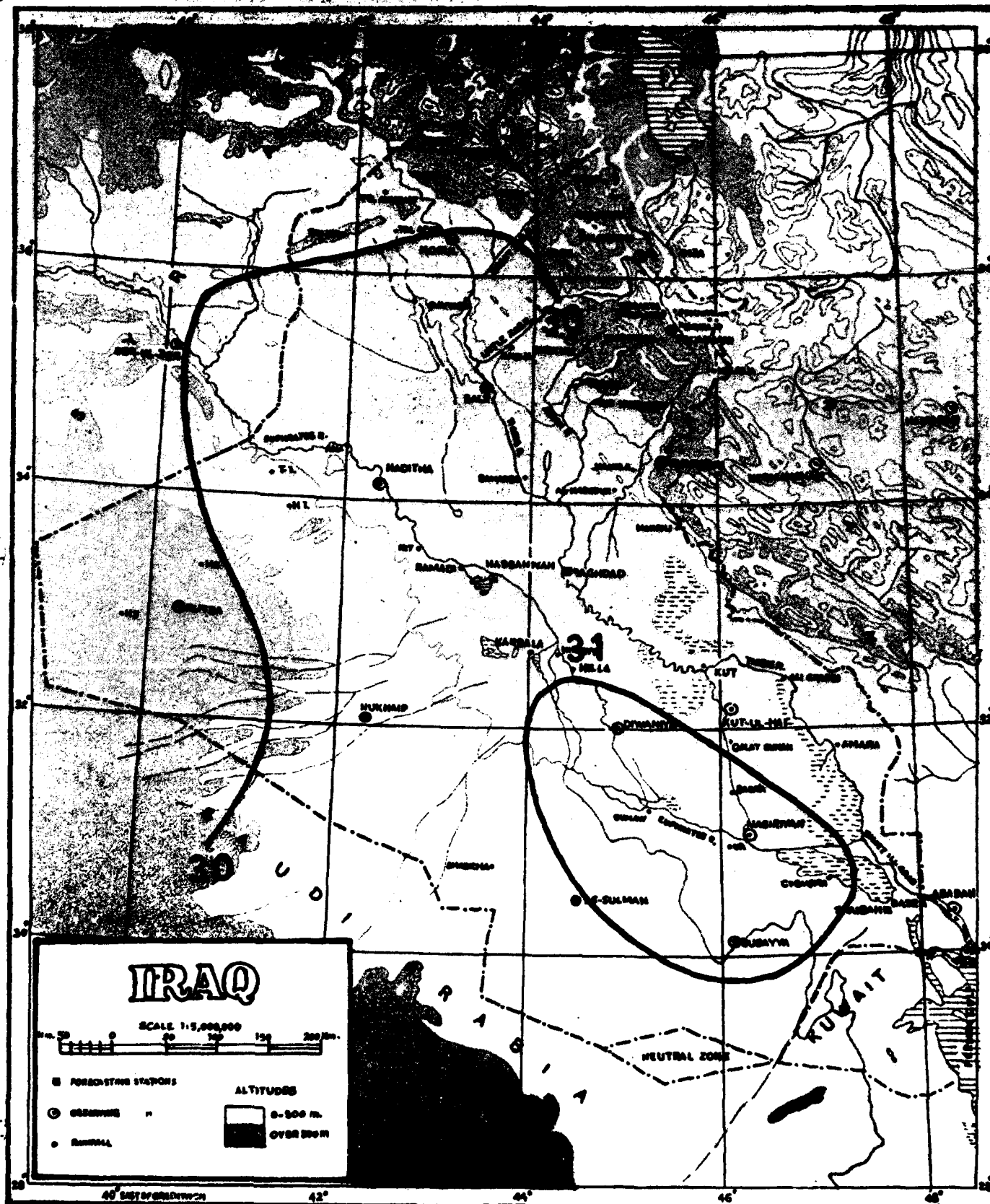




TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature $\geq 30^{\circ}\text{C}$ or More
 (continued on page 14)

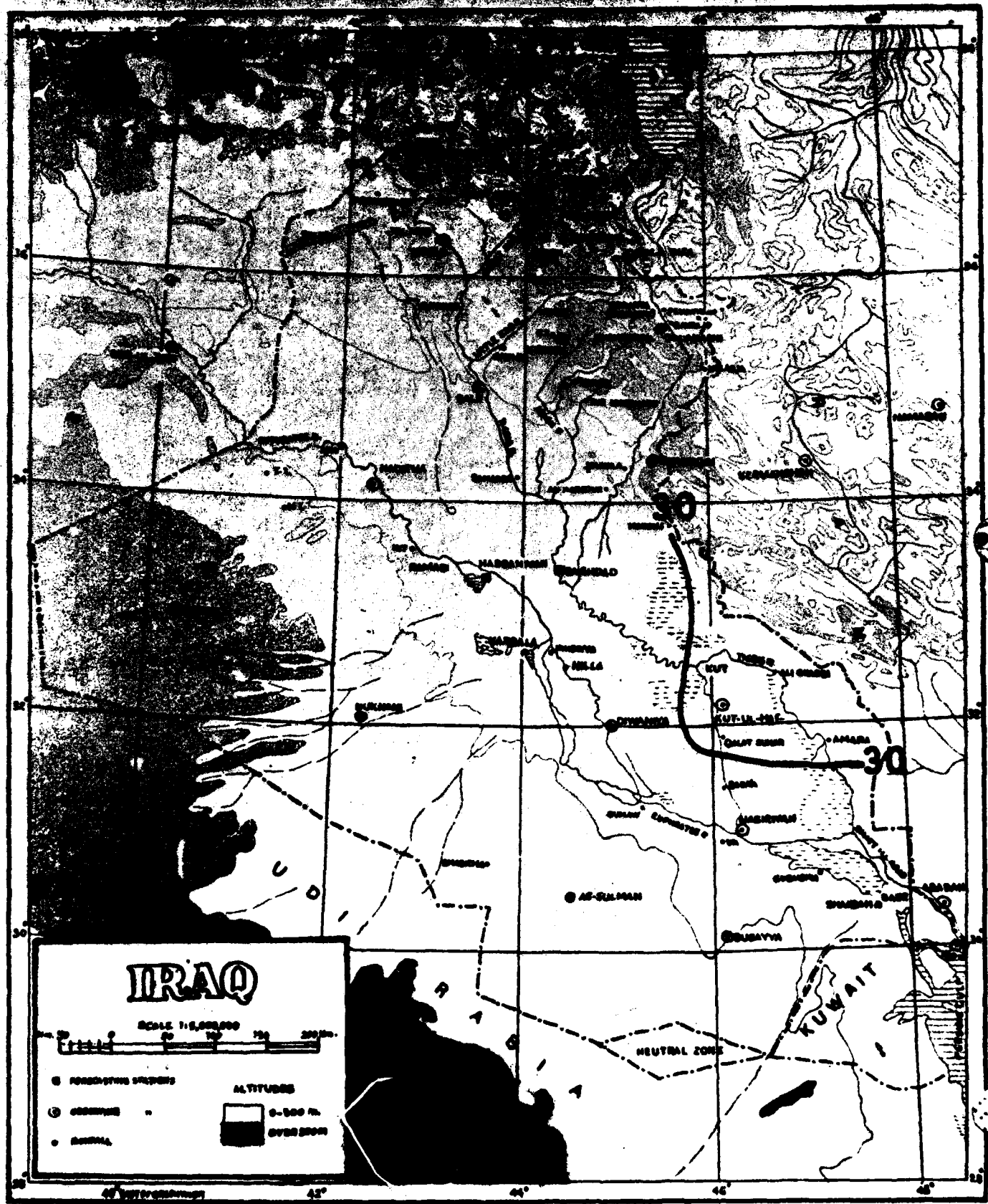
MAY



TEMPERATURE

Mean Monthly Maximum of Daytime Maximum Temperature 25°C or More
 period of records see page 23

JUNE



85

period of records see page 2/3



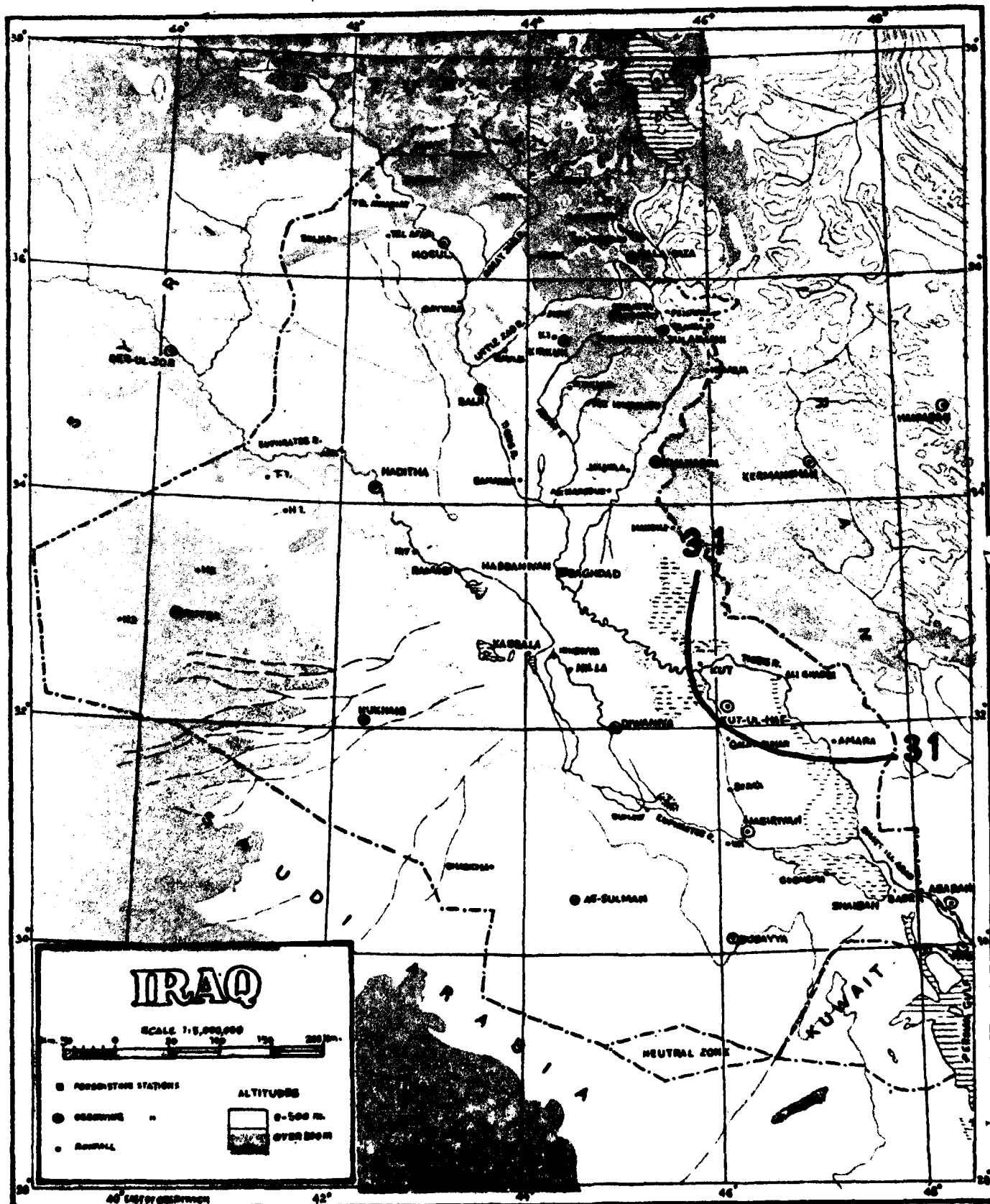
SURVEY PRESS, BAKHNOV.

TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25°C or More
period of records see page 2/3

86

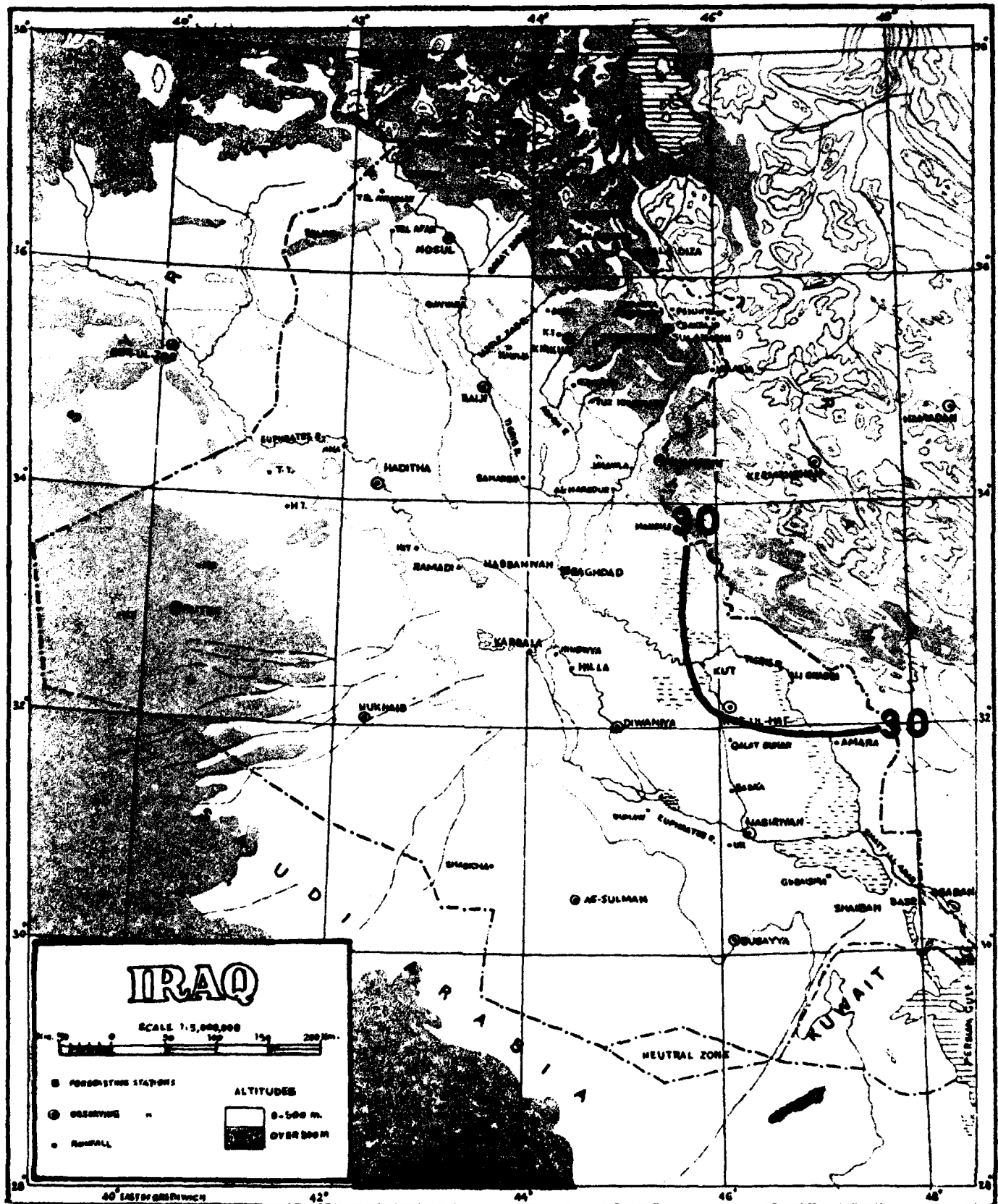
AUGUST



TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25 C° or More
period of records see page 2/3

87
SEPTEMBER

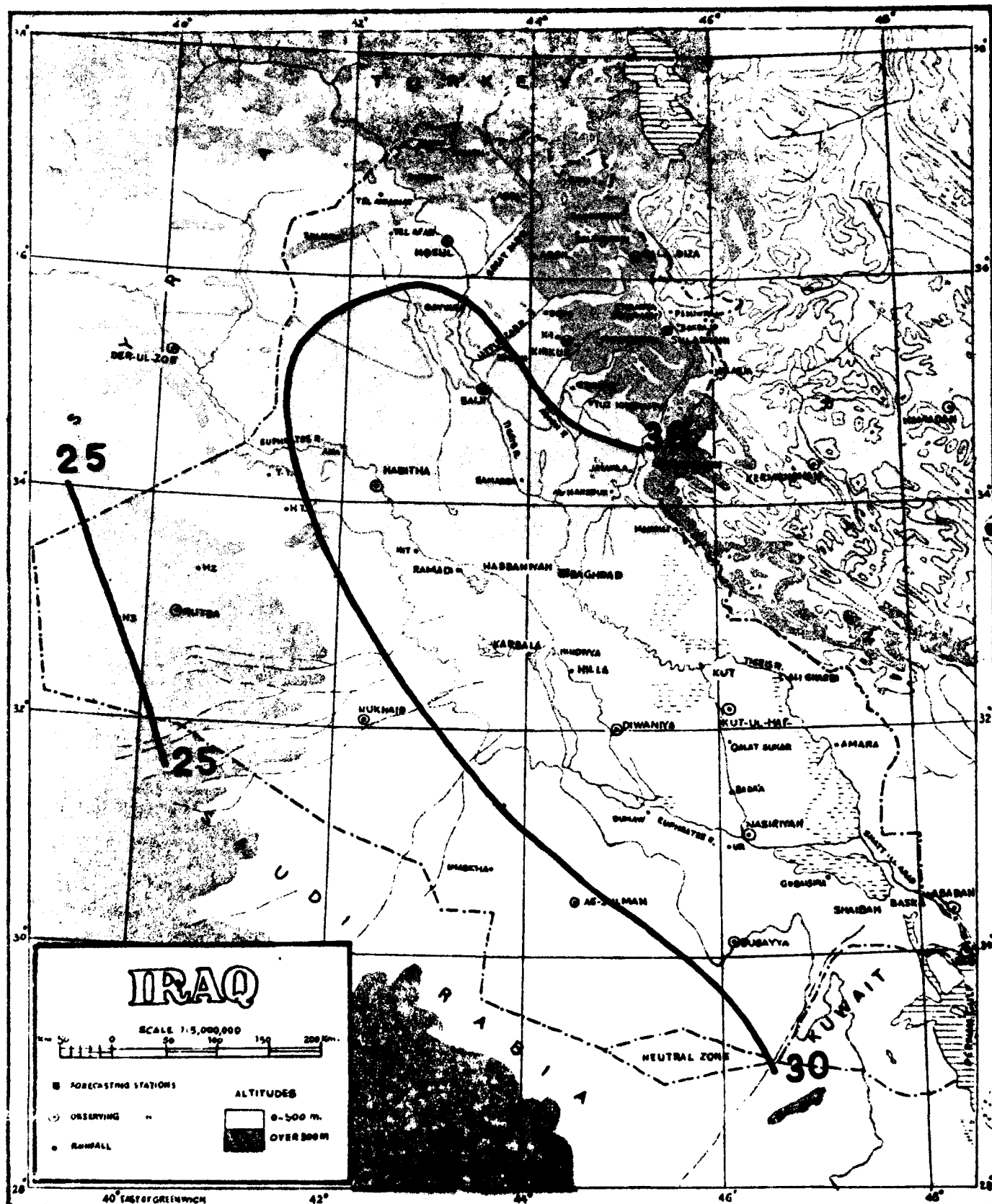


88

TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25 C° or More
period of records see page 2/3

OCTOBER

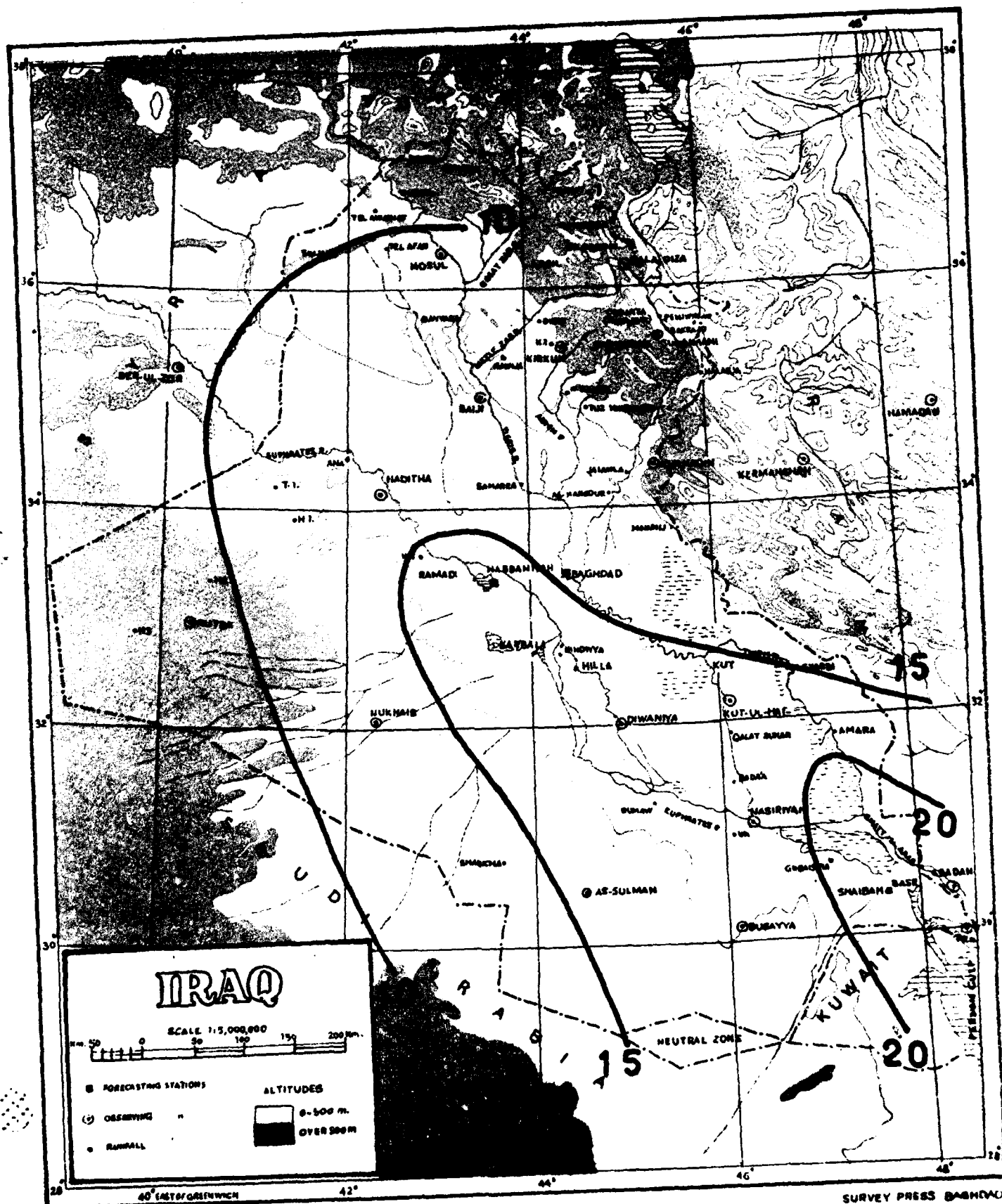


89

TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25 C° or More
period of records see page 2/3

NOVEMBER

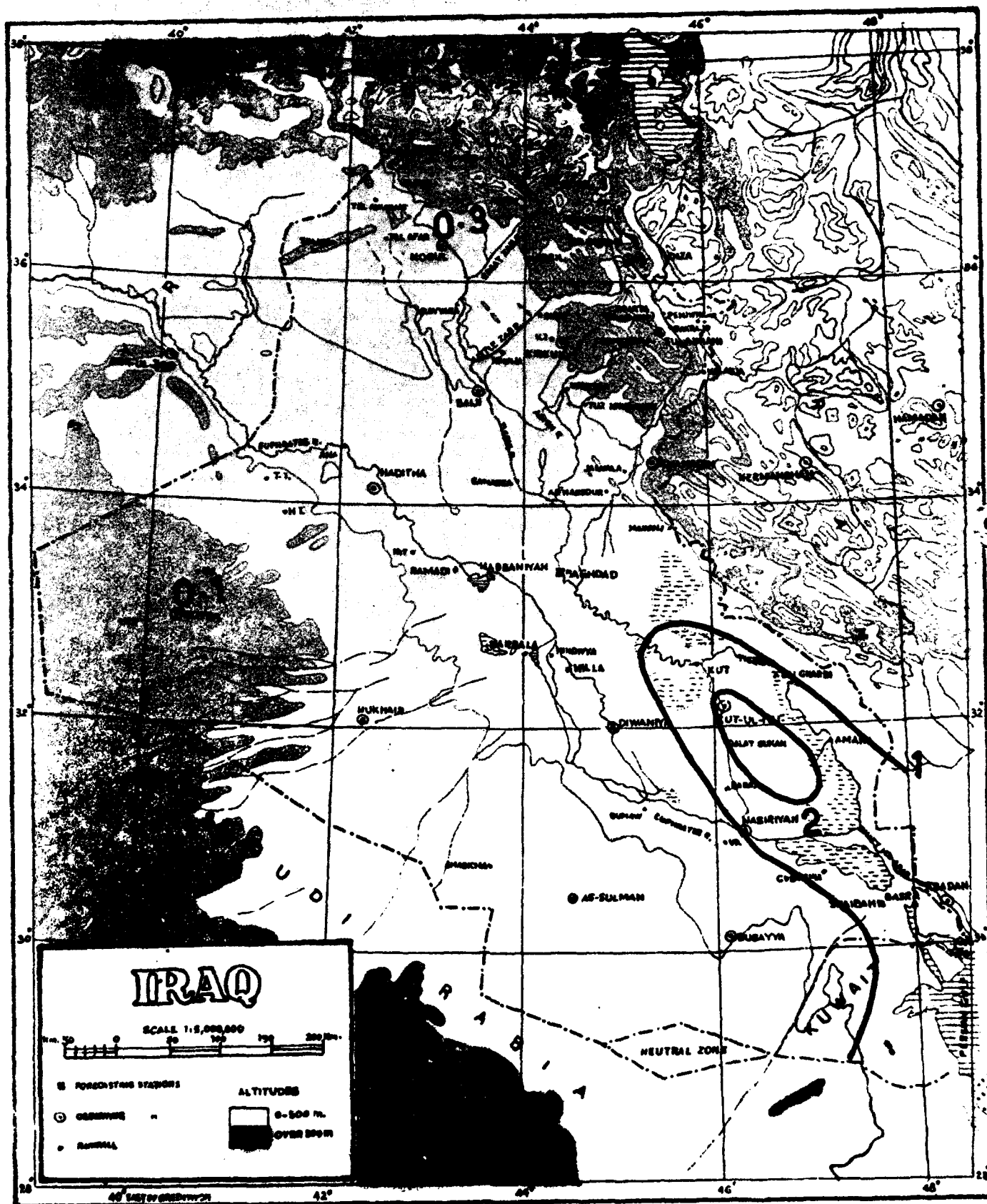


90

TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 25 C° or More
period of records see page 2/3

DECEMBER

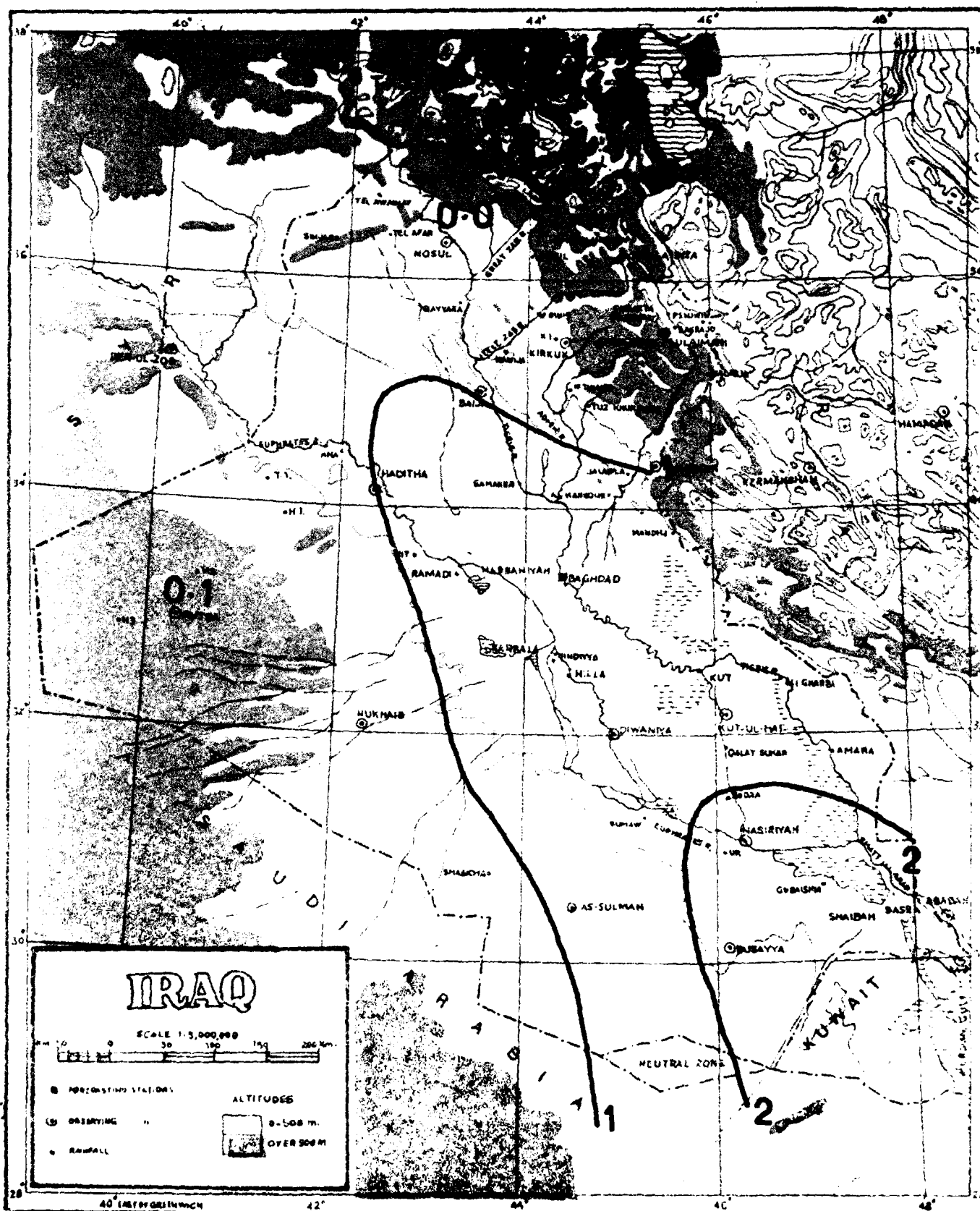


TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 30 C° or More
period of records see page 2/3

91

MARCH



AD-A159 703

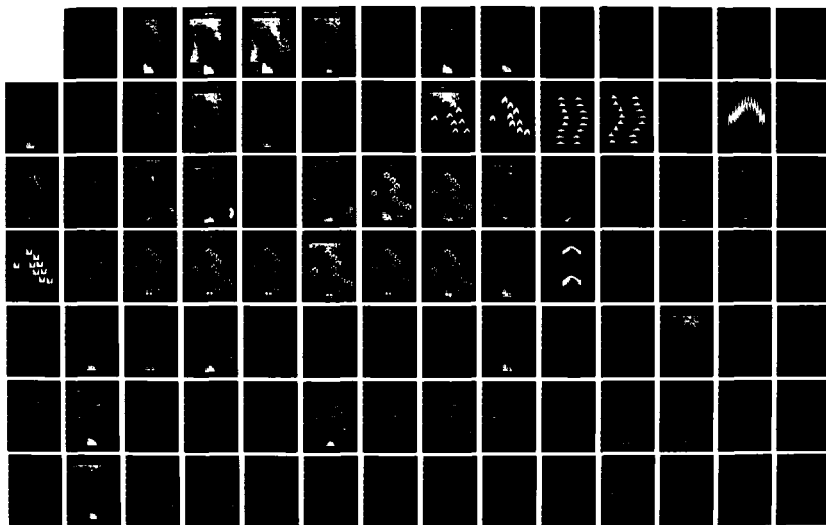
CLIMATOLOGICAL ATLAS FOR IRAQ(U) AIR FORCE
ENVIRONMENTAL TECHNICAL APPLICATIONS CENTER SCOTT AFB
IL APR 85 USAFETAC/DS-85/011

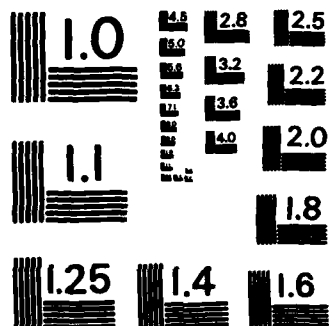
2/3

UNCLASSIFIED

F/G 4/2

NL

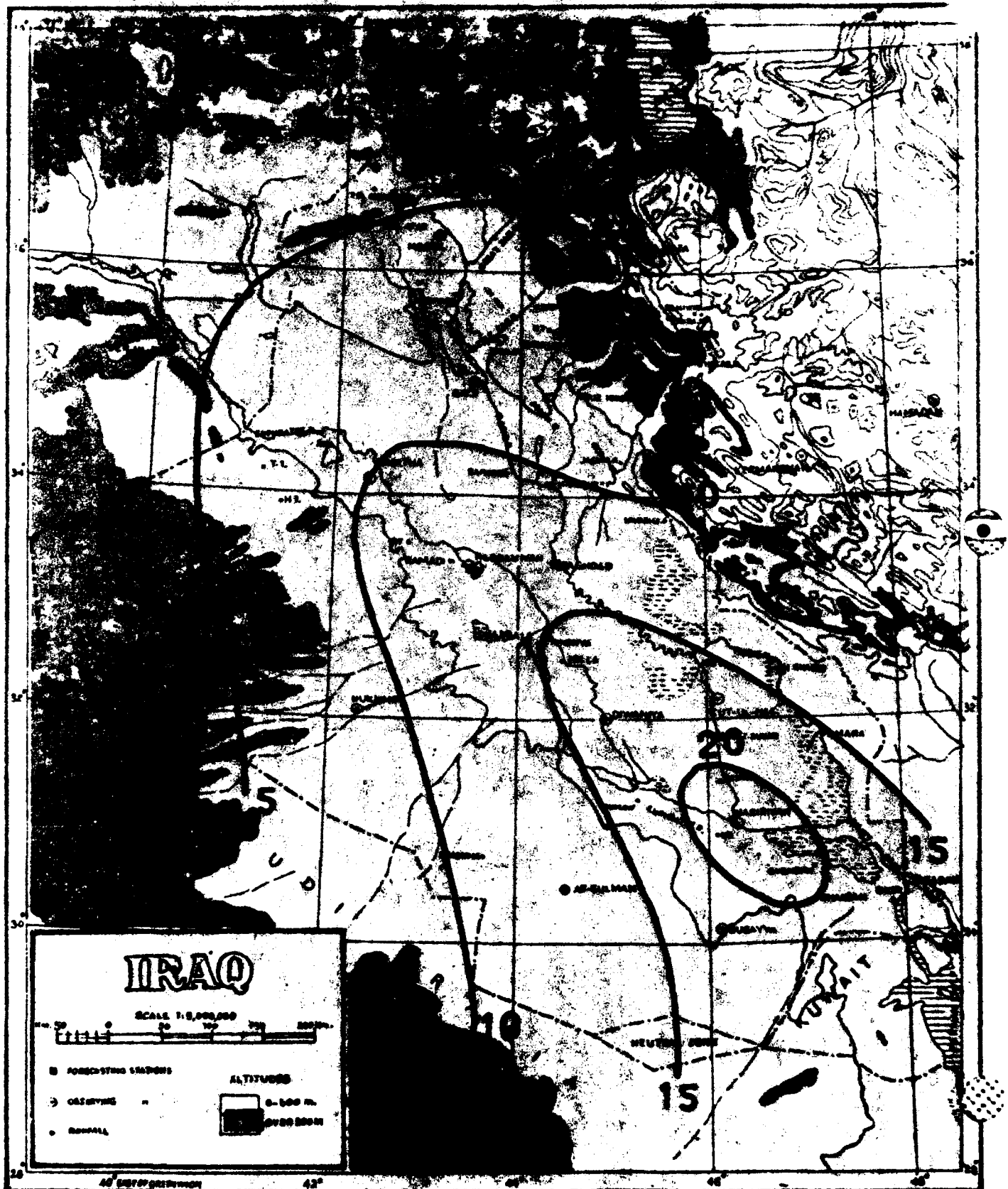




MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TEMPERATURE 92
 Mean Monthly Number of Days with Maximum Temperature 30 C or More
 period of records see page 2/3

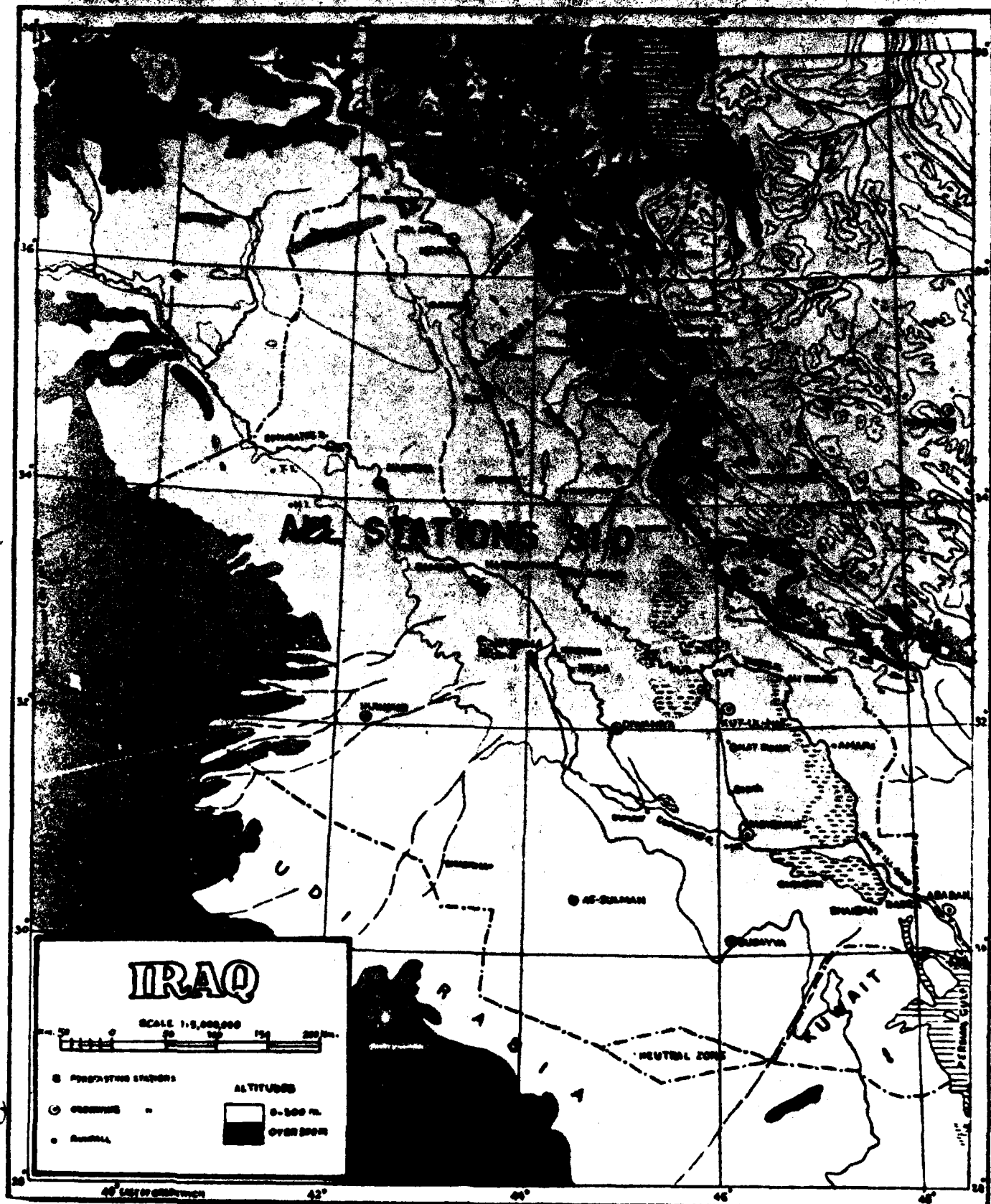
APRIL





TEMPERATURE

JULY AUGUST

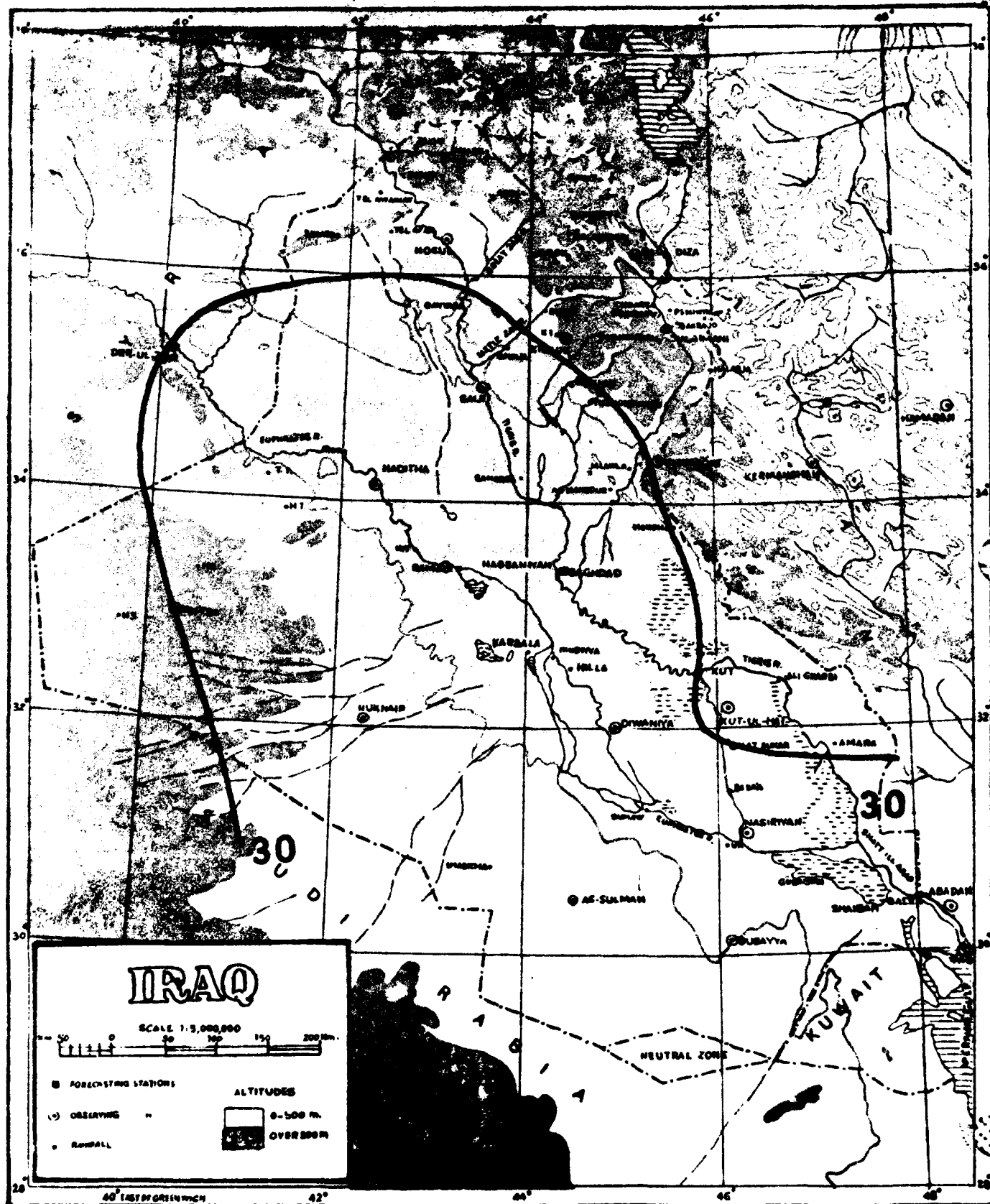


TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 30 C° or More
period of records see page 2/3

96

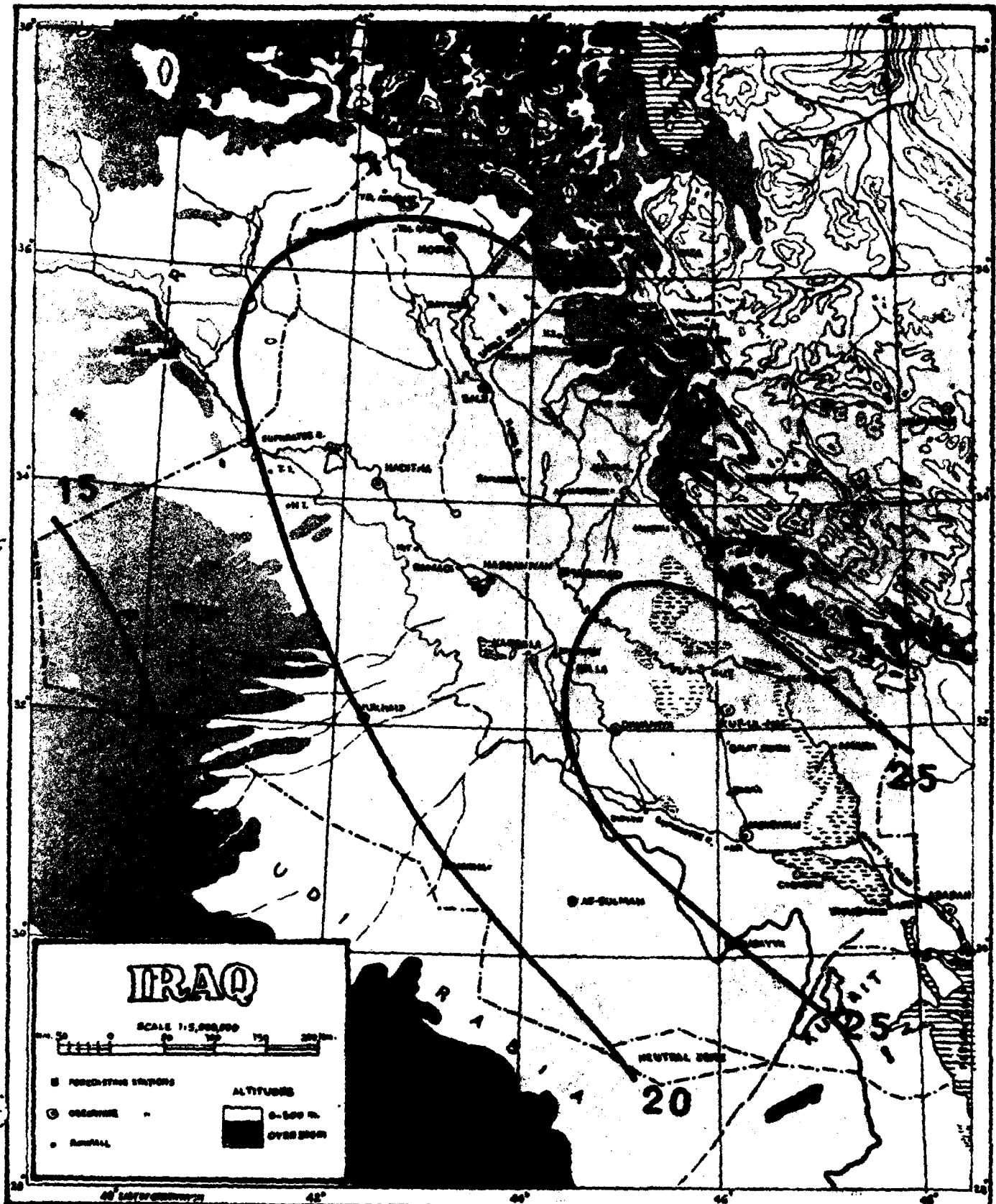
SEPTEMBER



TEMPERATURE
 Mean Monthly Number of Days with Maximum Temperature 30 C° or More
 period of records see page 2/3

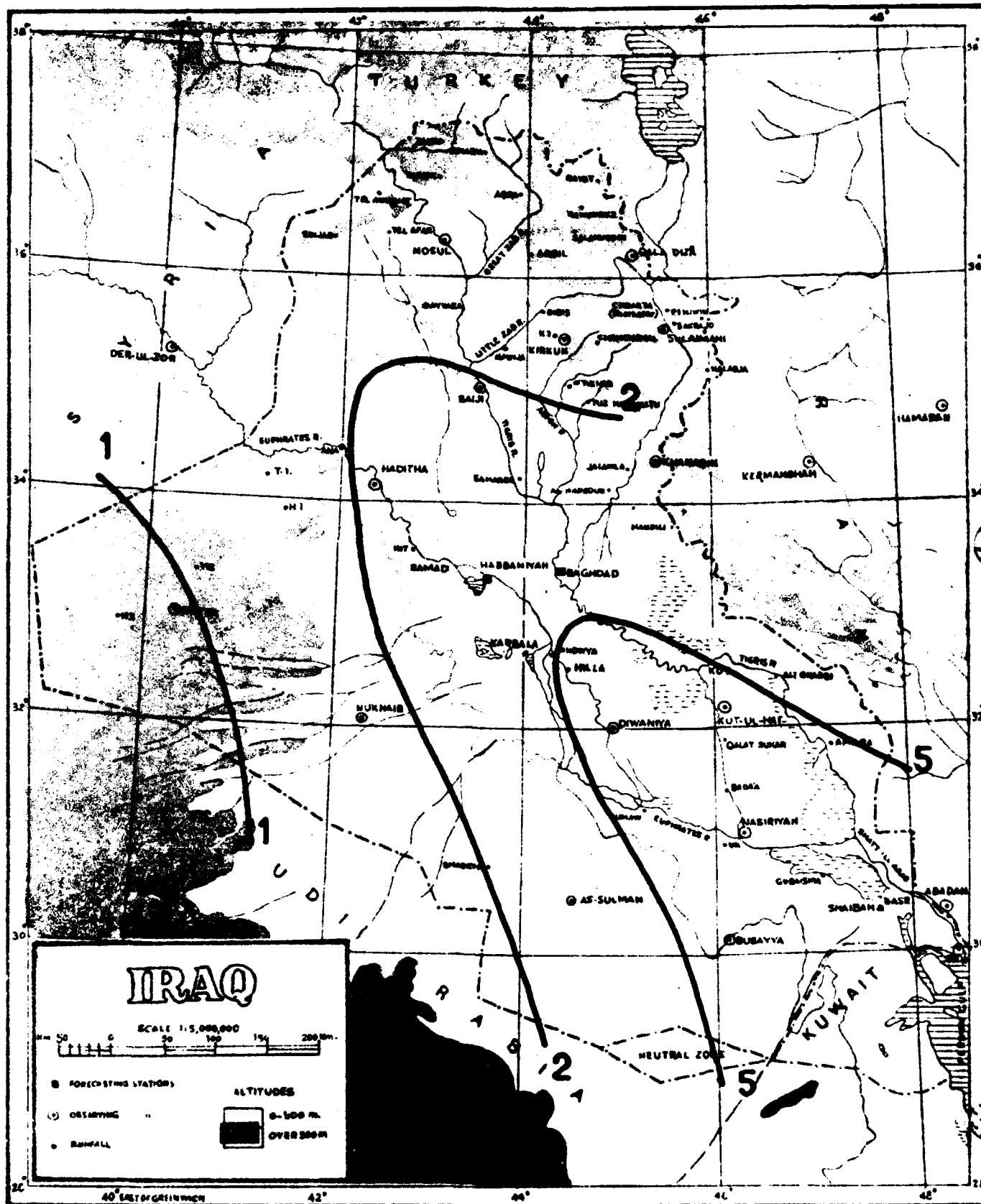
97

OCTOBER



SURVEY PRESS, BAHAMAS

TEMPERATURE 98
Mean Monthly Number of Days with Maximum Temperature 30 C° or More
 period of records see page 2/3
NOVEMBER

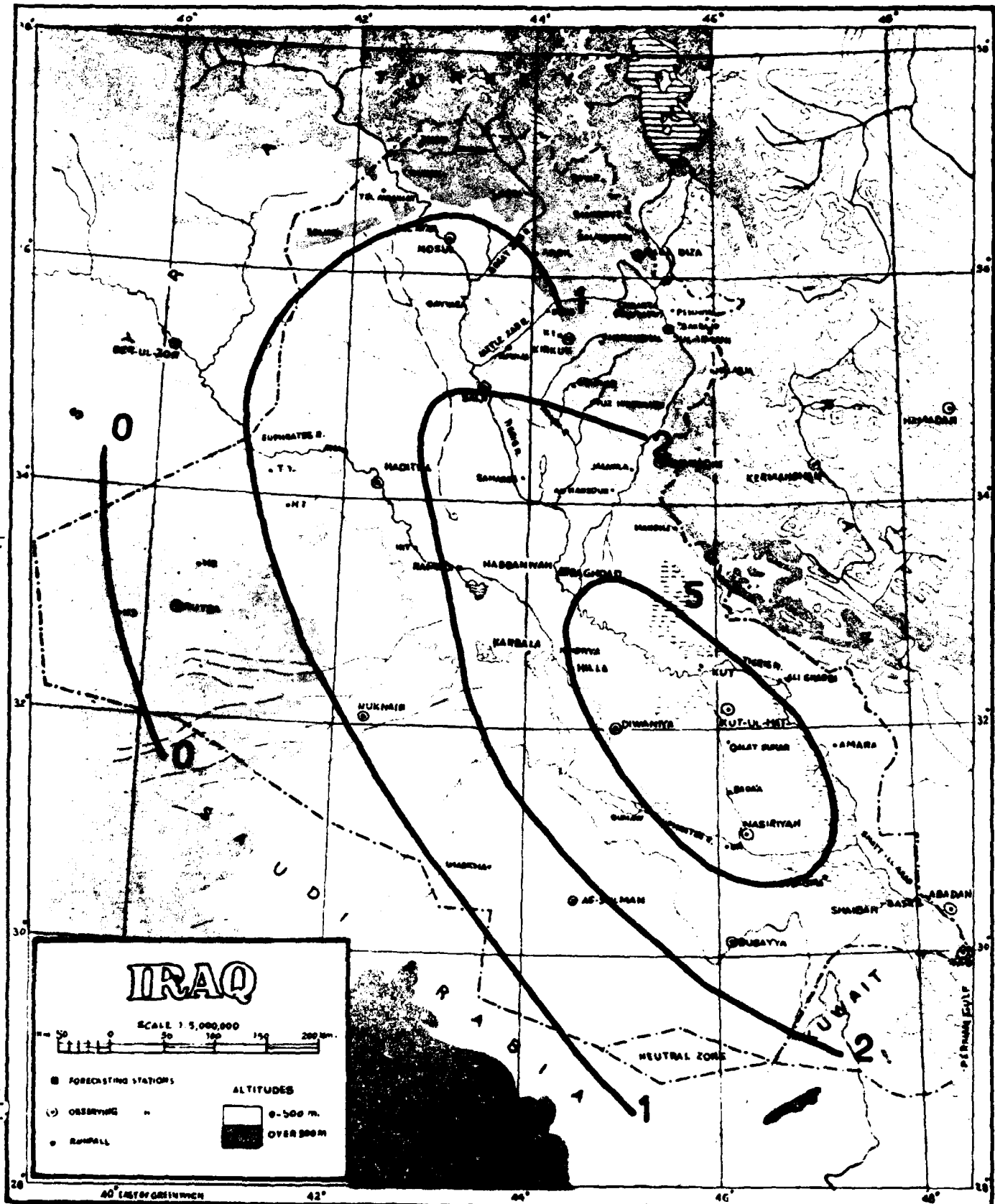


TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 40 C° or More
period of records see page 2/3

99

MAY

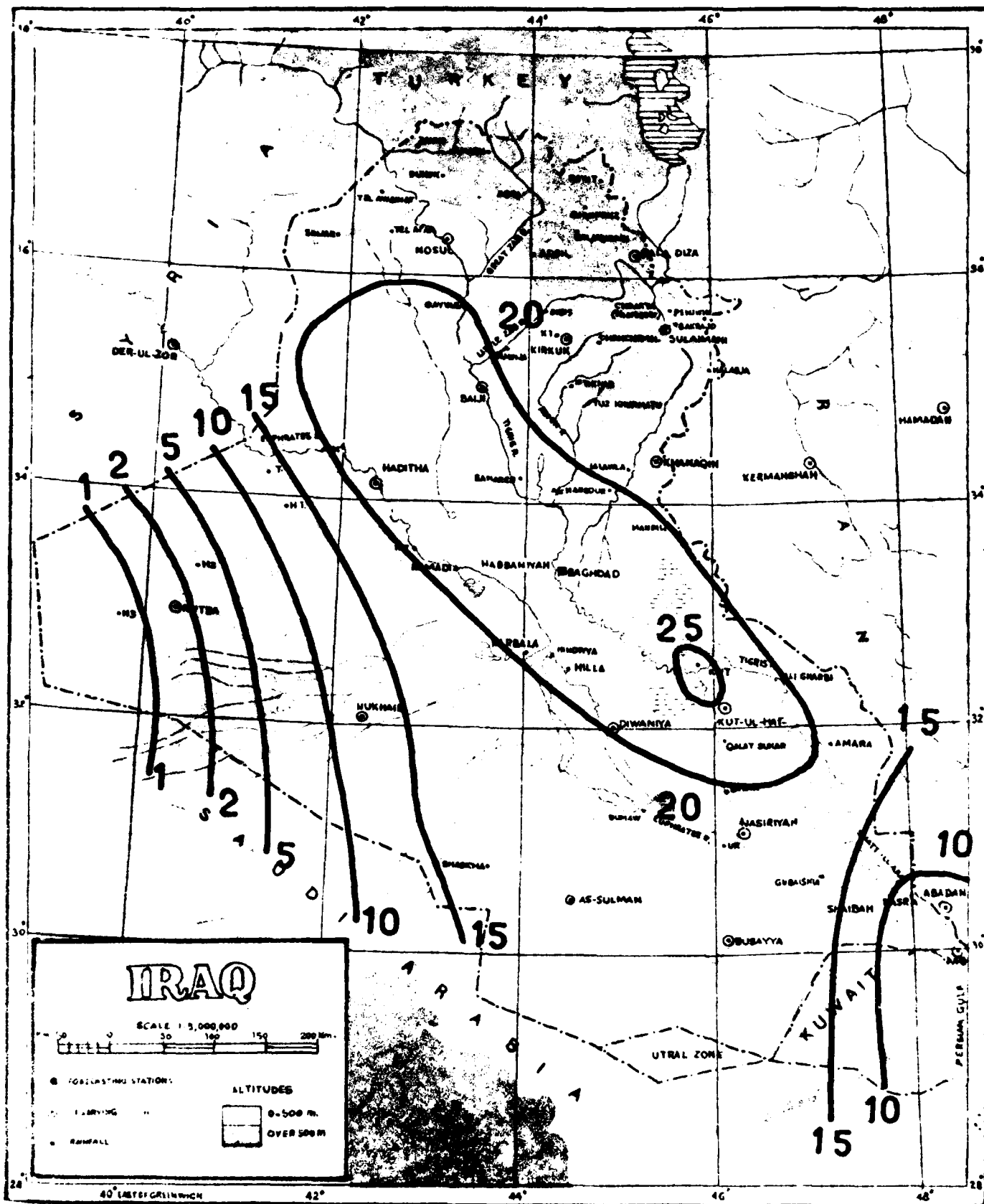


TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 40°C or More
period of records see page 2/3

100

JUNE

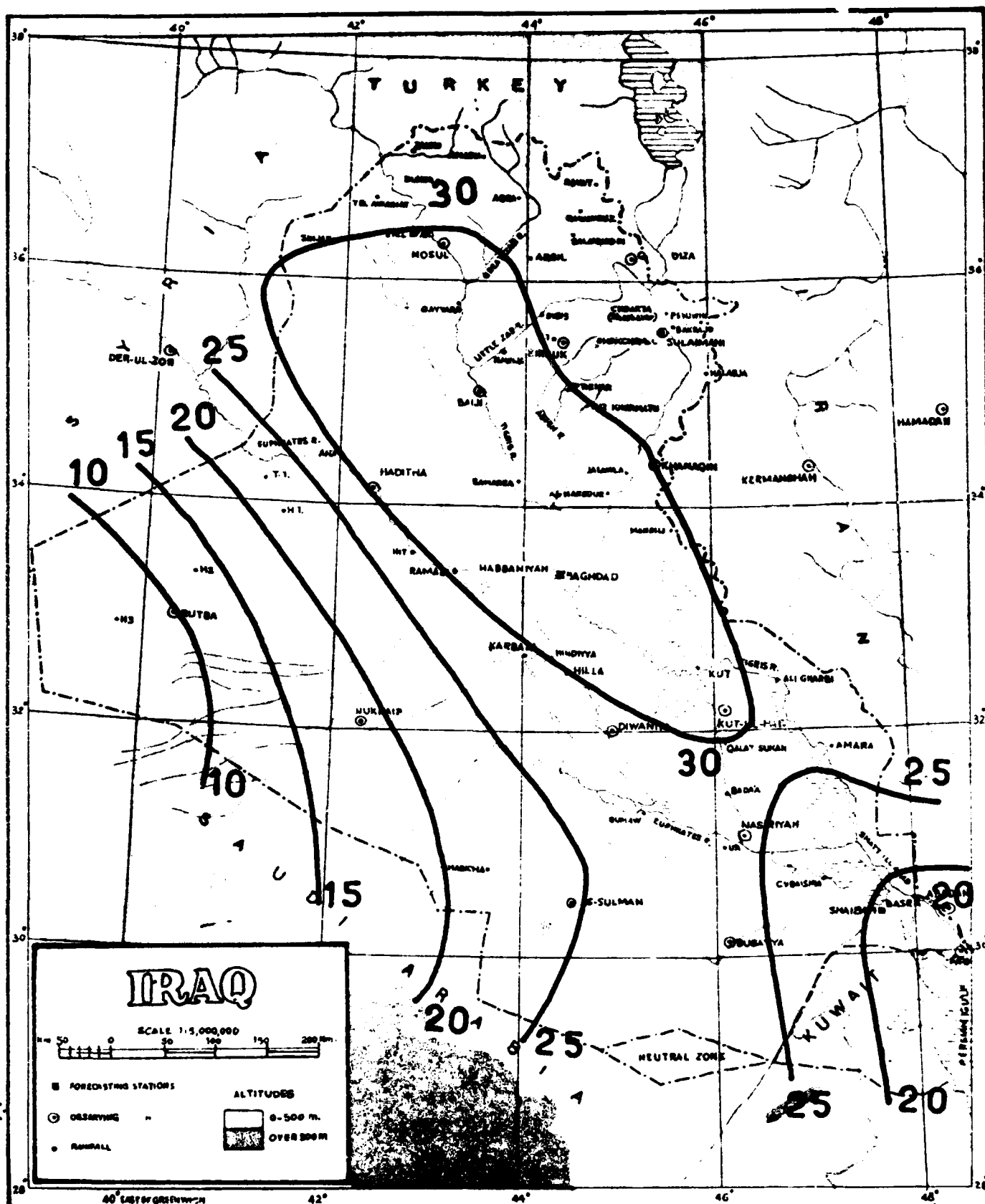


TEMPERATURE

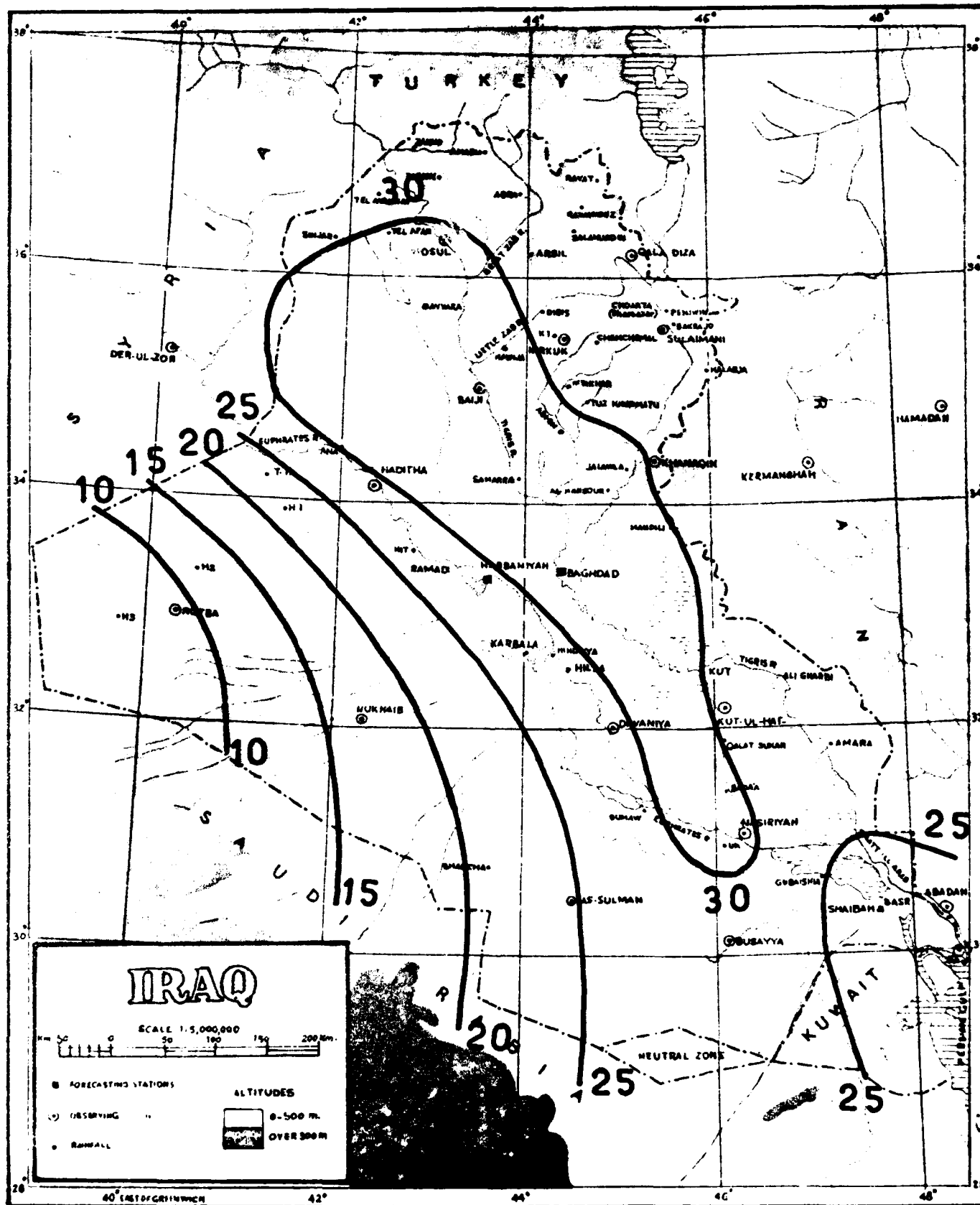
Mean Monthly Number of Days with Maximum Temperature 40 C° or More
period of records see page 2/3

101

JULY



TEMPERATURE 102
Mean Monthly Number of Days with Maximum Temperature 40 C° or More
 period of records see page 2/3
AUGUST

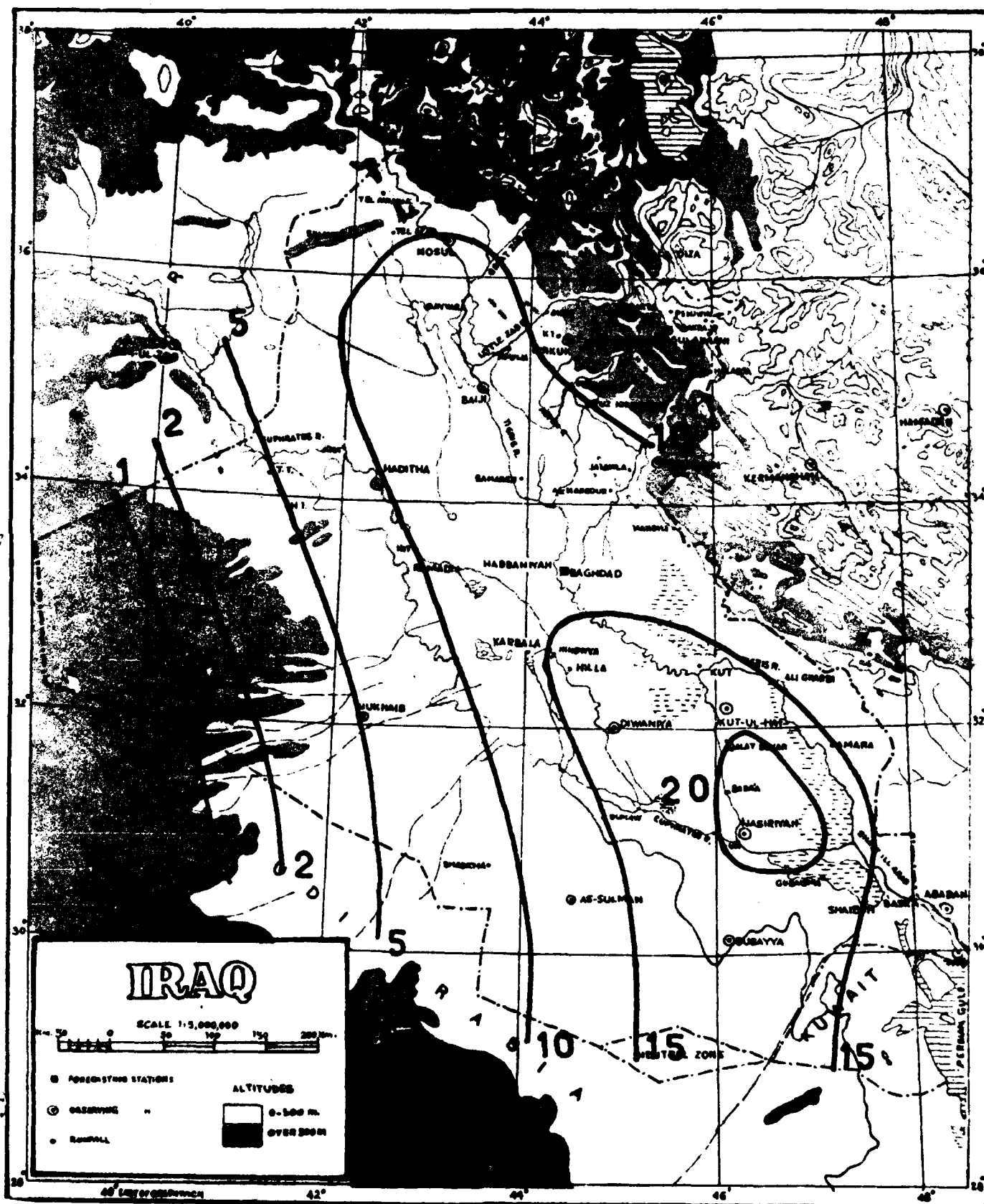


TEMPERATURE

Mean Monthly Number of Days with Maximum Temperature 40 C° or More
period of records see page 2/3

103

SEPTEMBER



OCTOBER



105

MAY

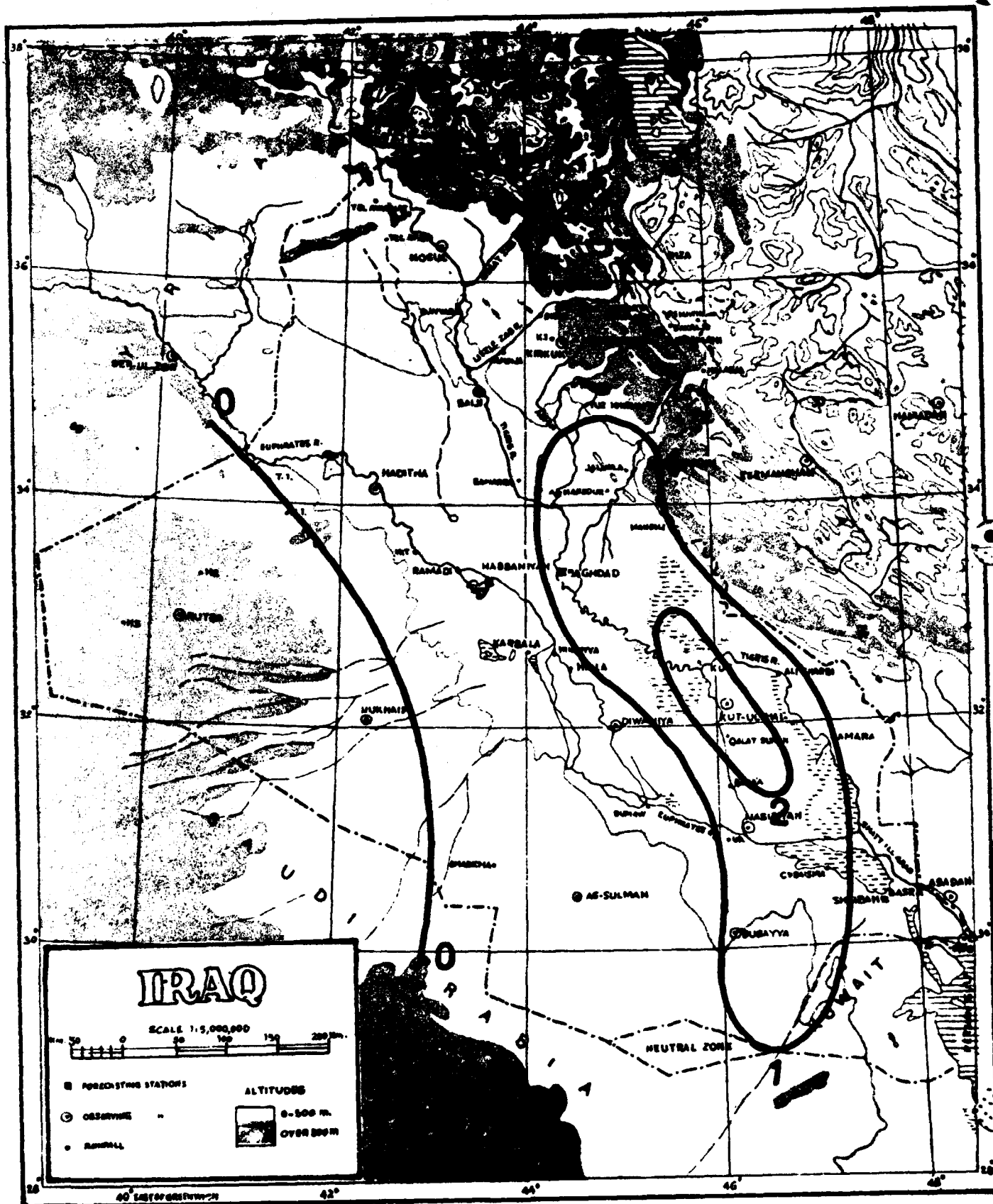


106

TEMPERATURE

Mean Monthly Number of Days with Temperature Maximum Exceeding 45 C°
period of records see page 2/3

JUNE

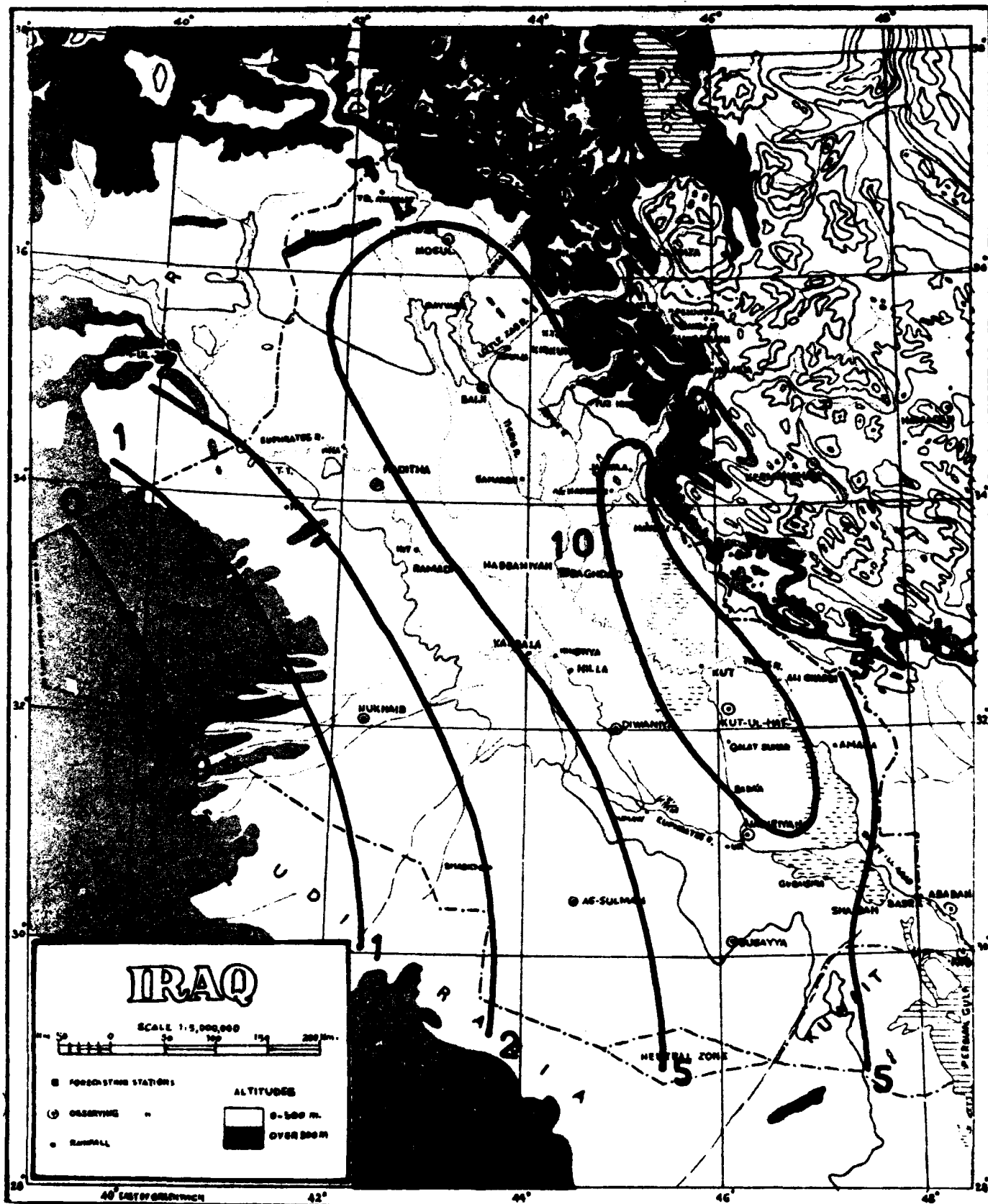


TEMPERATURE

Mean Monthly Number of Days with Temperature Maximum Exceeding 45°C
period of records see page 2/3

197

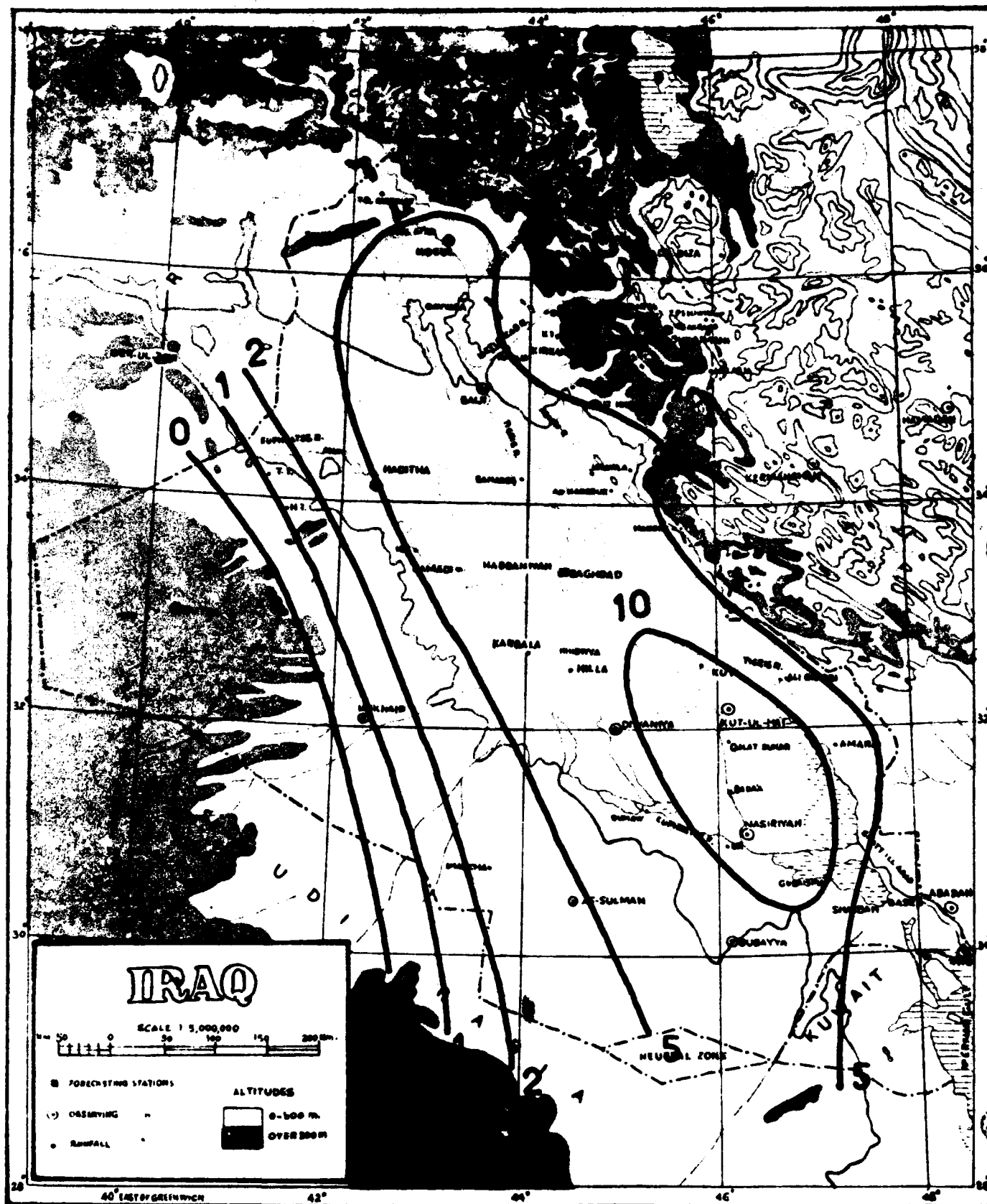
JULY



TEMPERATURE

Mean Monthly Number of Days with Temperature Maximum Exceeding 45 C°
period of records see page 2/3

AUGUST



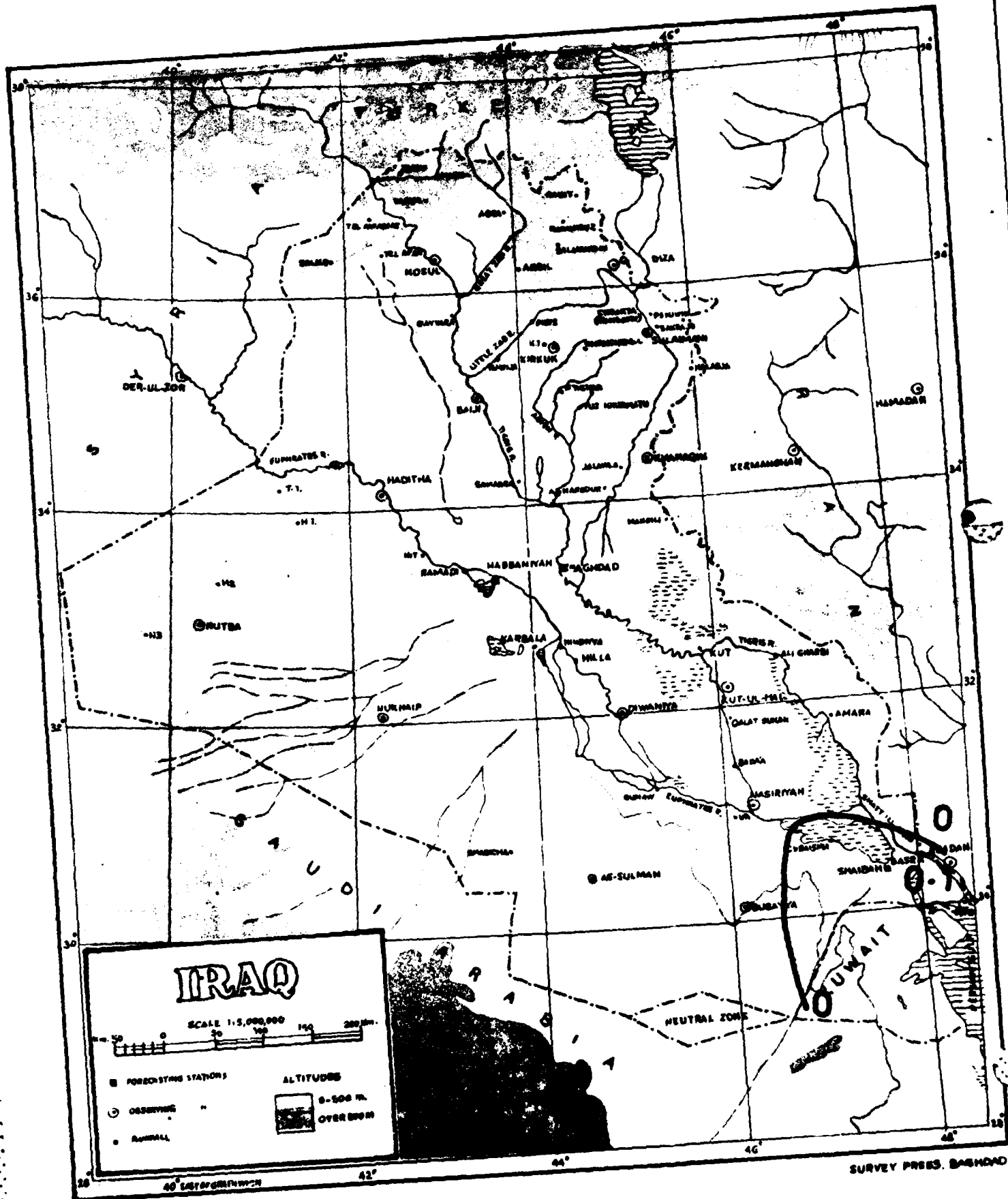
[illegible]

110

TEMPERATURE

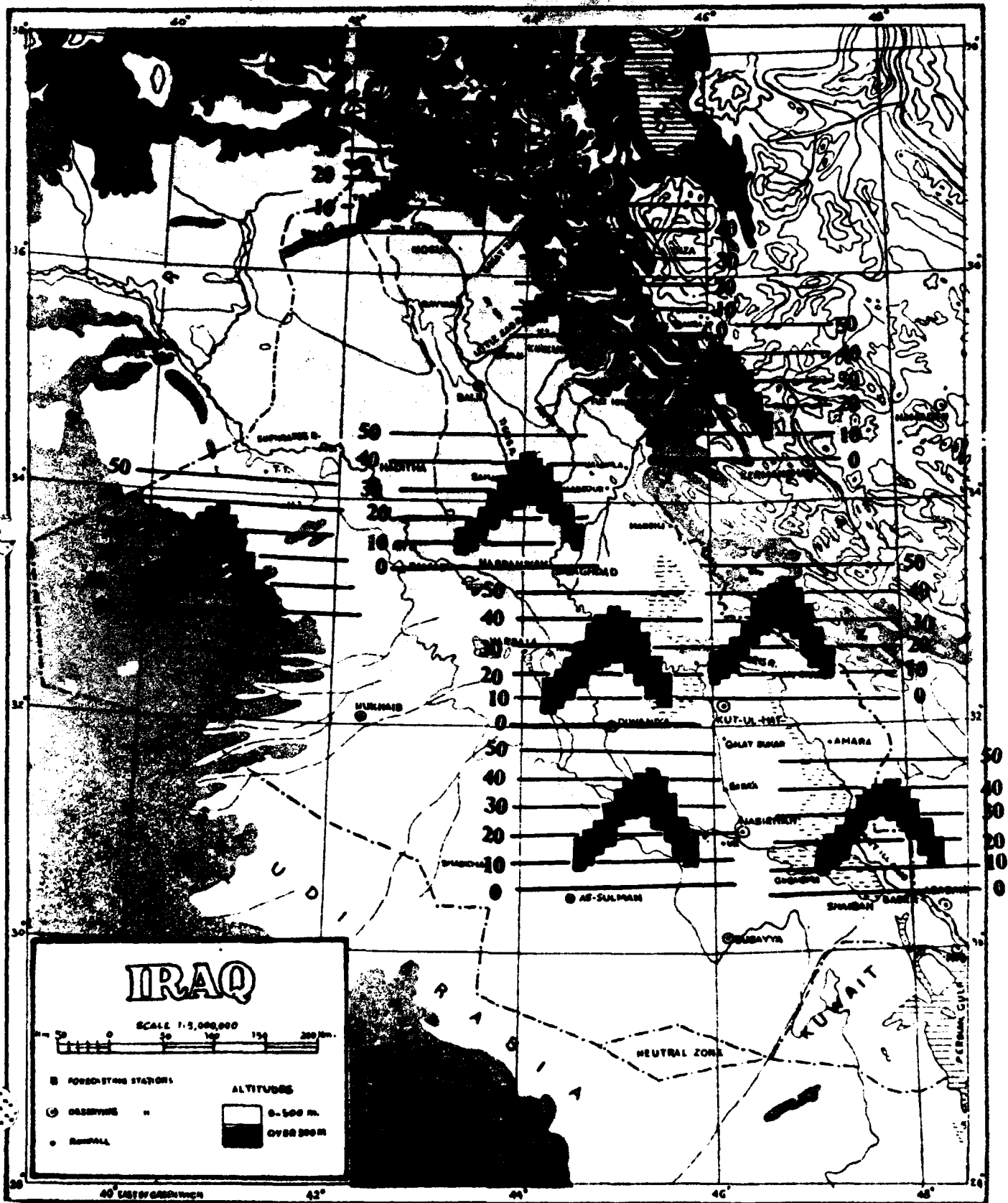
Mean Monthly Number of Days with Temperature Maximum Exceeding 45 C°
period of records see page 2/3

OCTOBER



111

Mean Monthly Maximum and Mean Monthly Minimum (Celsius)
Each Column Represents One Month Starting with January (Left)
period of records see page 2/3

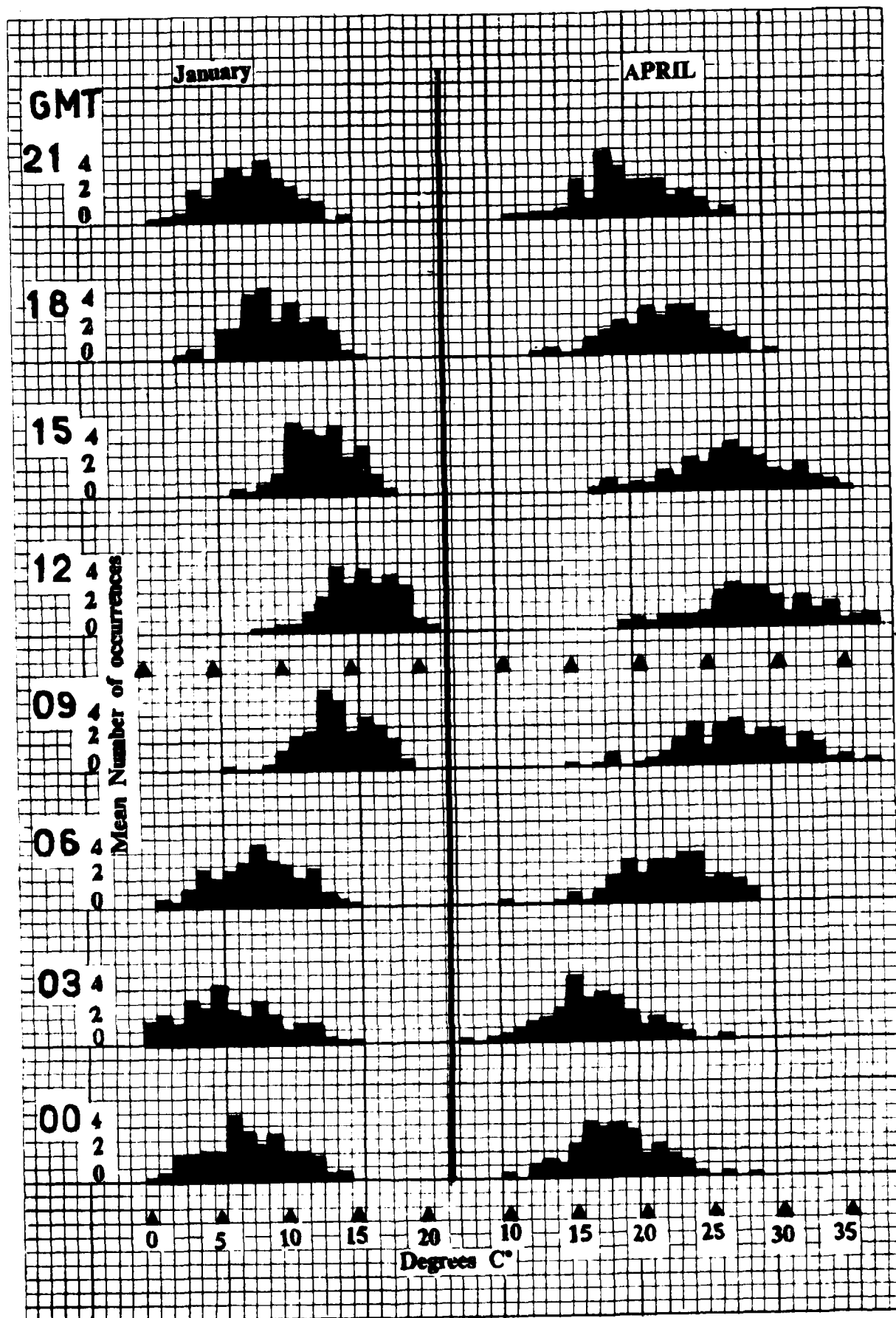


444



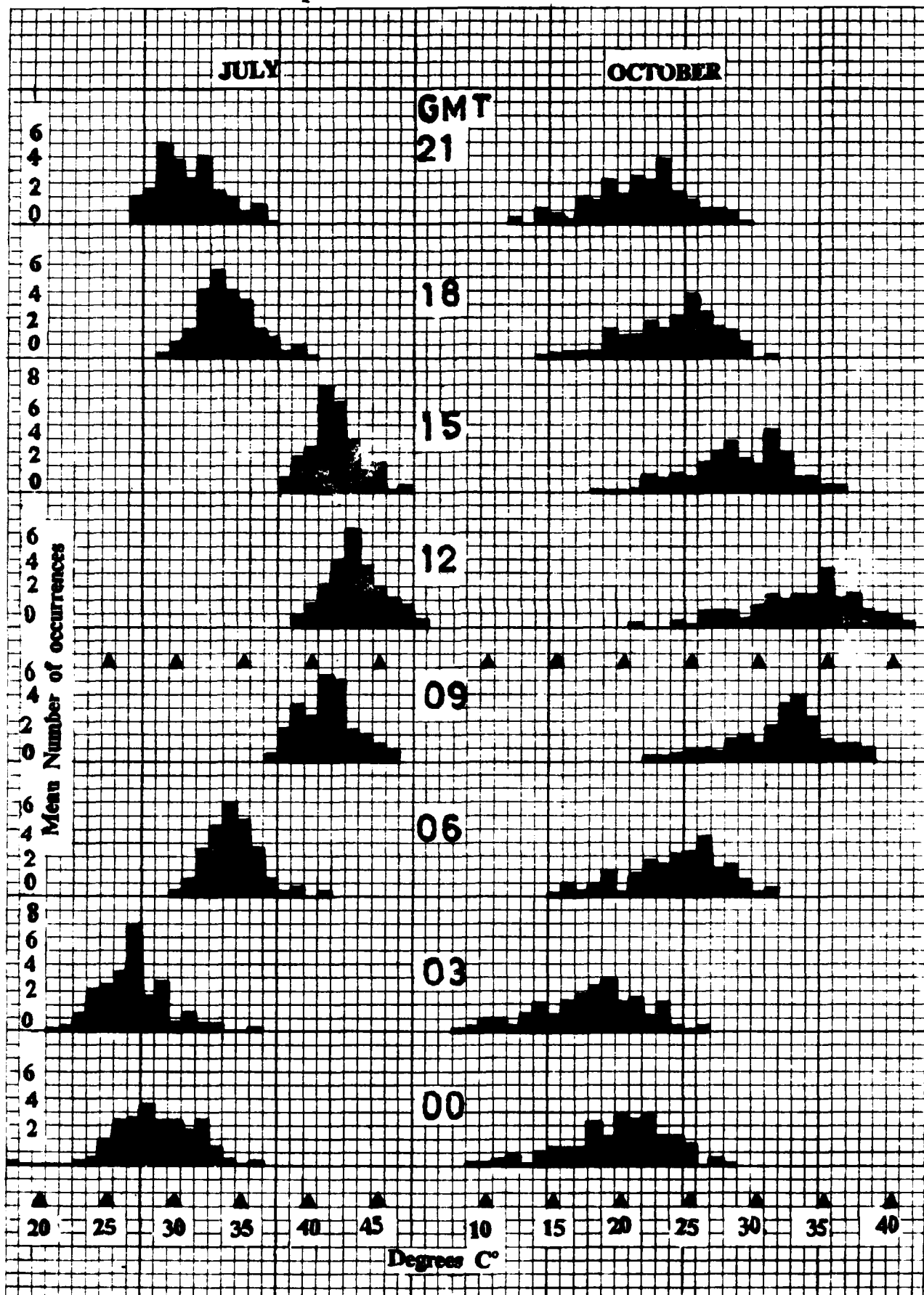
TEMPERATURE
Mean Number of Specified Values
of Surface Dry Bulb Temperature
at Baghdad Airport
period of records 1951-1955

113

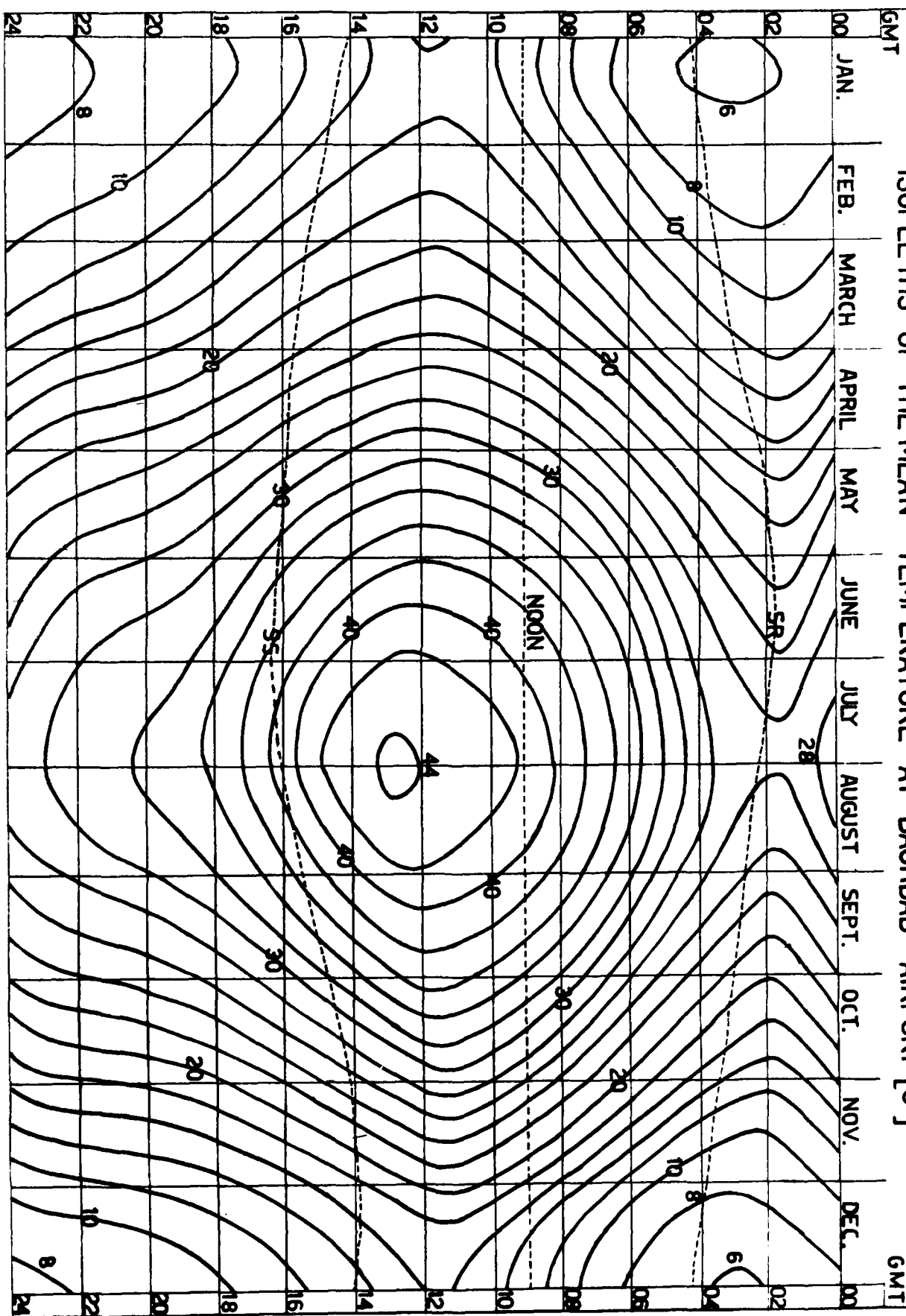


Mean Number of Specified Values
of Surface Dry Bulb Temperature
at Baghdad Airport
period of records 1951-1955

114



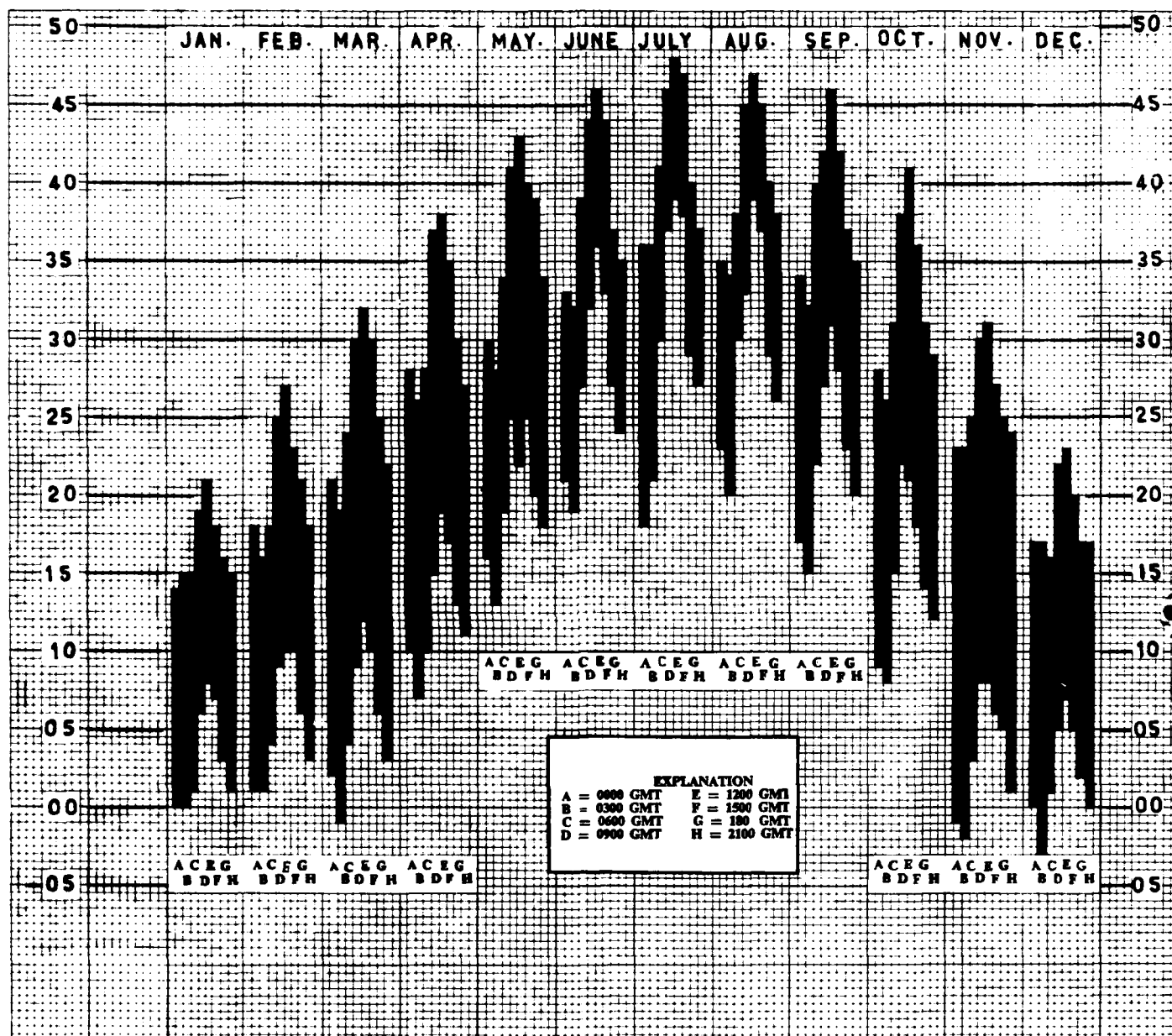
ISOPLETHS OF THE MEAN TEMPERATURE AT BAGHDAD AIRPORT [C°]



MONTHLY TEMPERATURE RANGES FOR SELECTED HOURS AT BAGHDAD AIRPORT [00, 03, 06, ETC. GMT]

115A

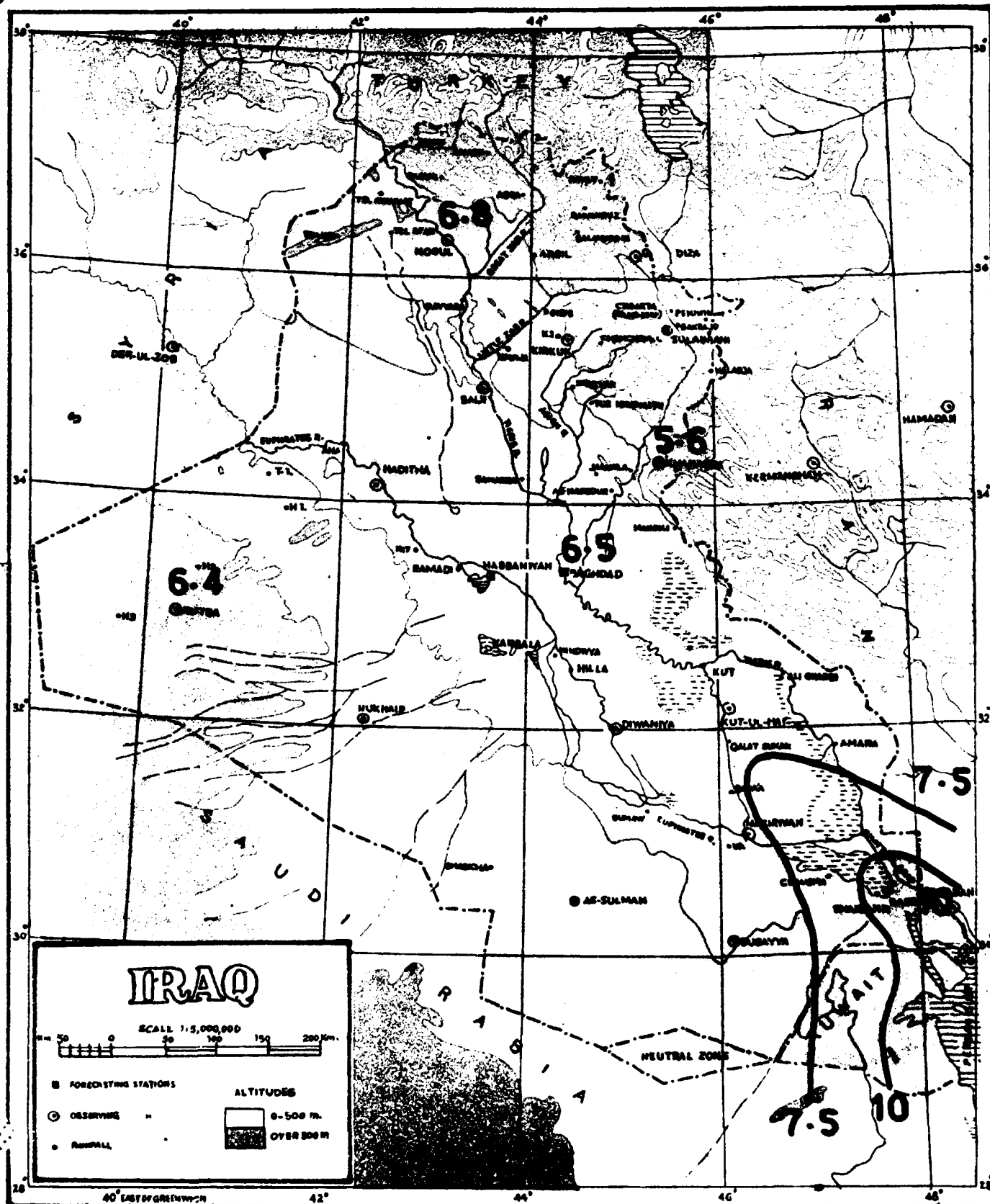
PERIOD OF RECORDS 1951 - 1955



HUMIDITY

Mean Annual Mixing Ratio (gm/kg)
period of records see page 2/3

116



117

JANUARY

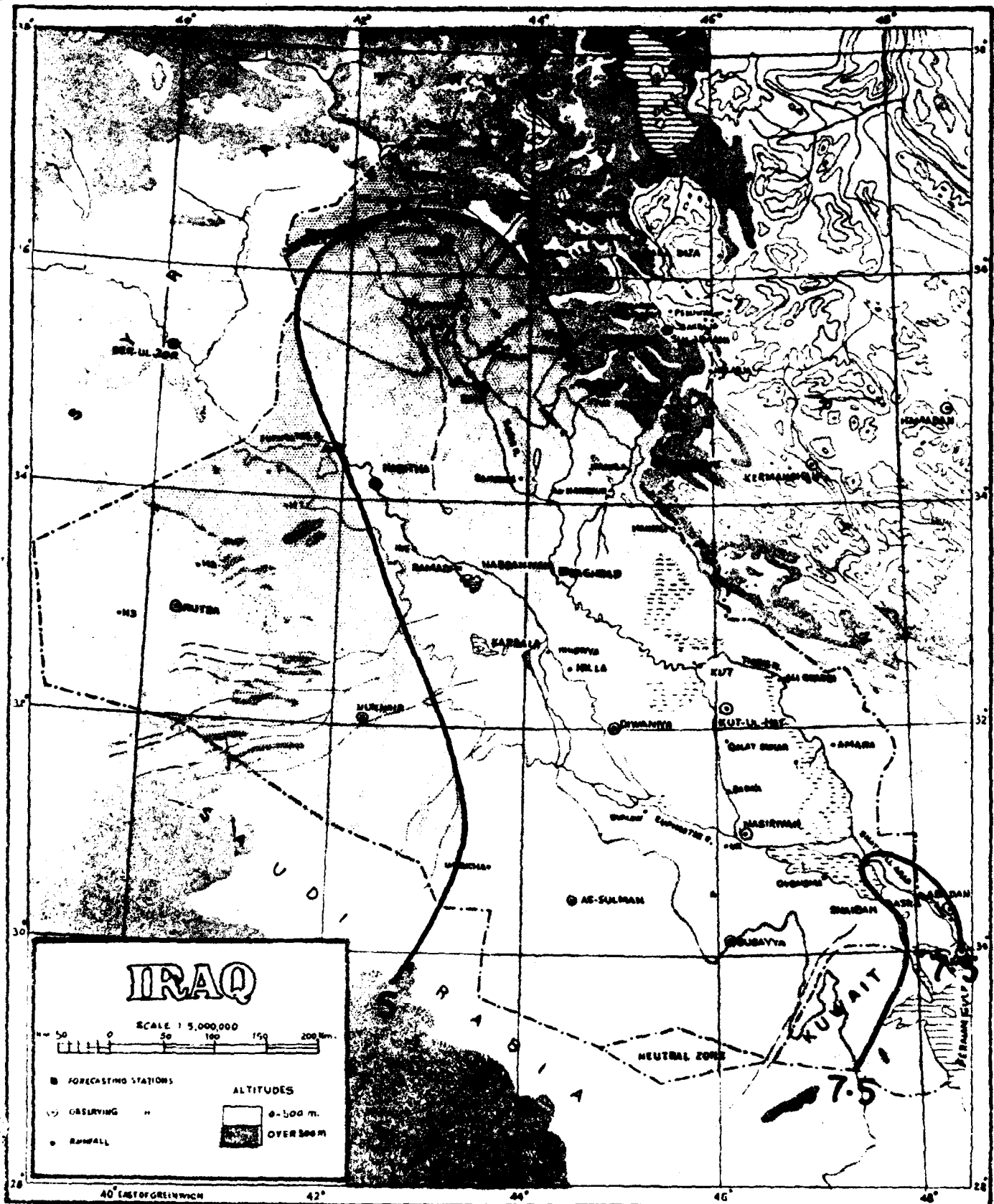


HUMIDITY

Mean Monthly Mixing Ratio (gm/kg)
period of records see page 2/3

118

MARCH

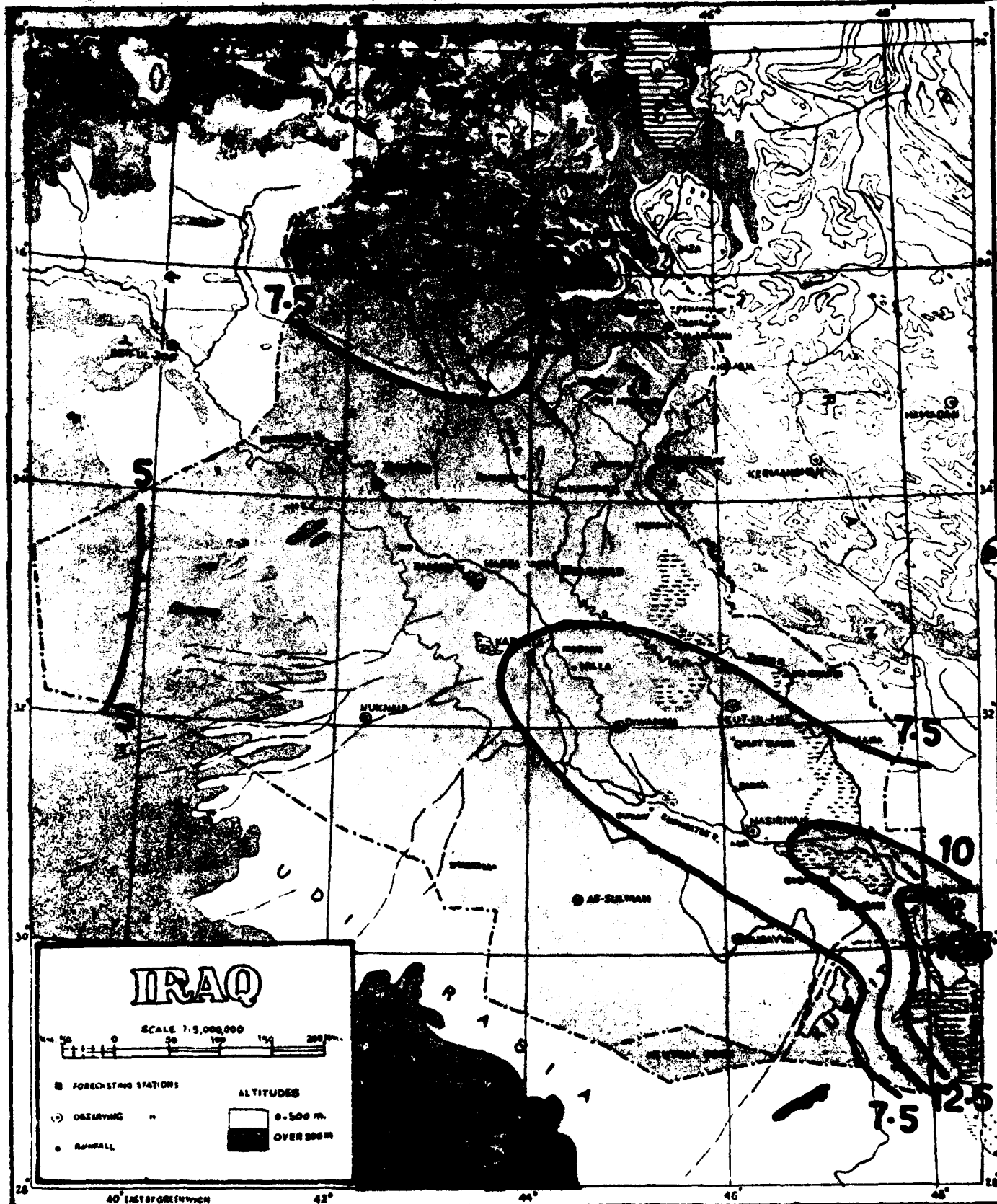


HUMIDITY

Mean Monthly Mixing Ratio (gm/kg)
period of records see page 23

189

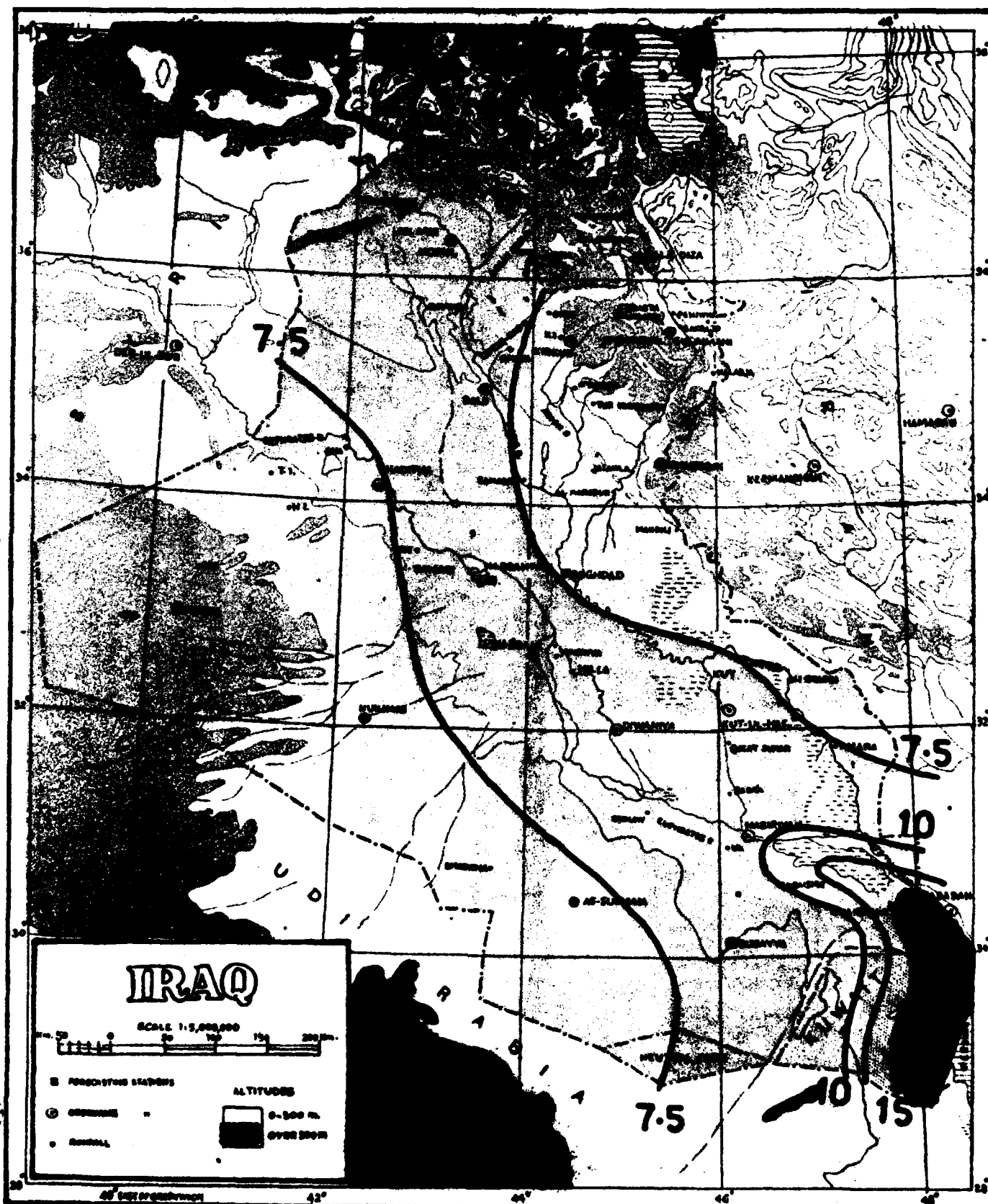
MAY



HUMIDITY

Mean Monthly Mixing Ratio (gm/kg)
period of records see page 2/3

DATE / / 196
120
JULY

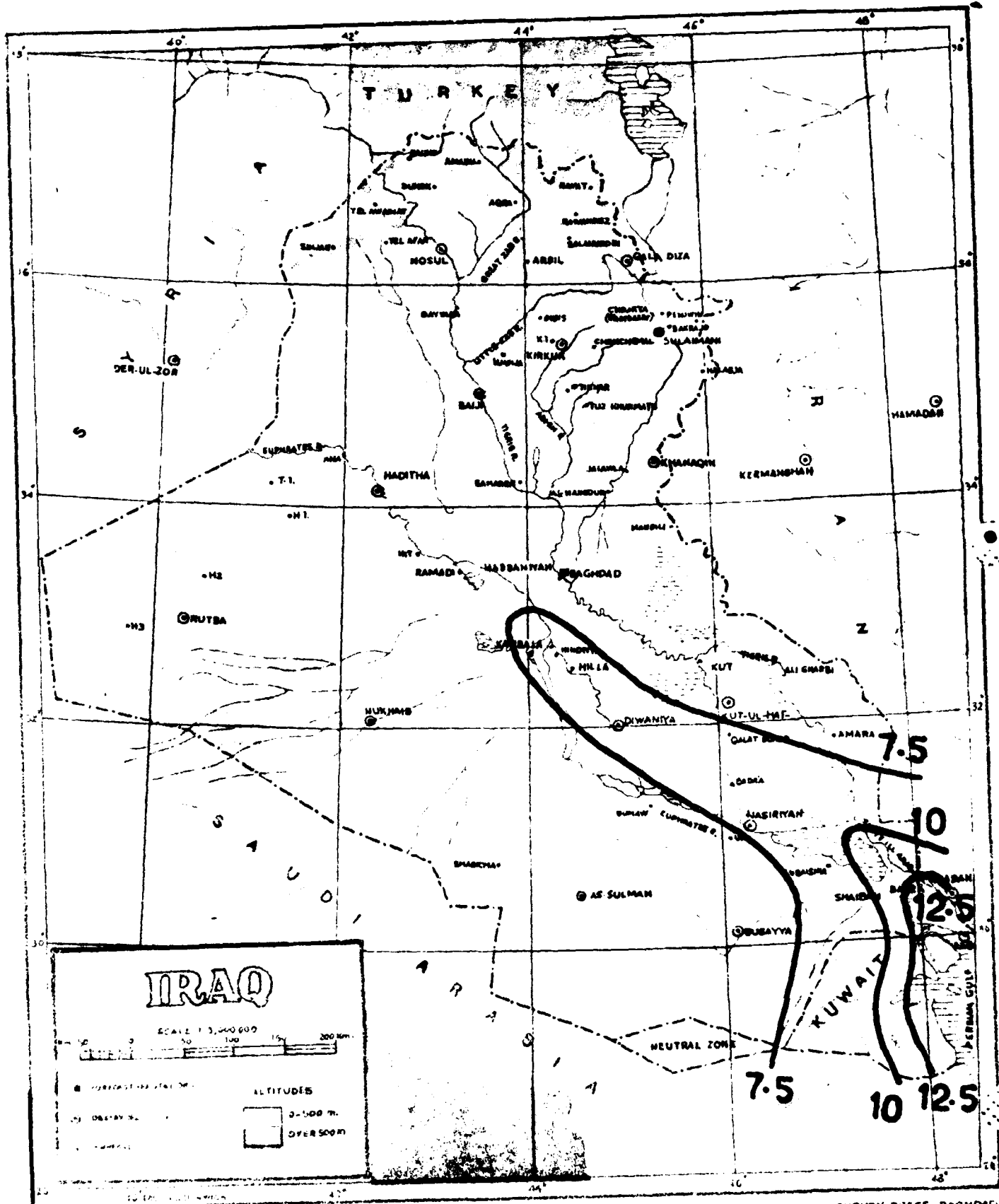


HUMIDITY

Mean Monthly Mixing Ratio (gm/kg)
period of records see page 2/3

123

SEPTEMBER

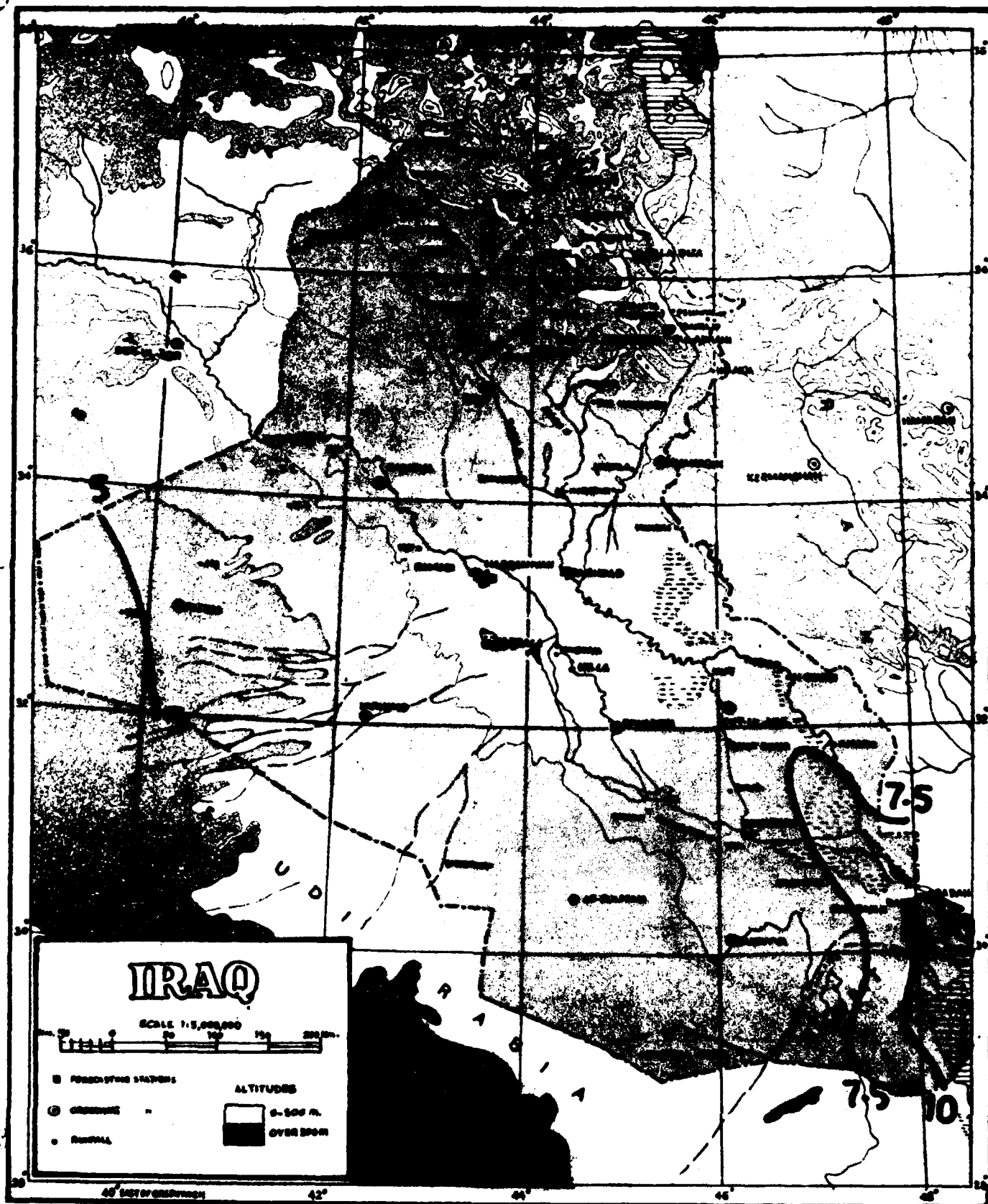


HUMIDITY

Mean Monthly Mixing Ratio (gm/kg)
period of records see page 2/3

122

NOVEMBER

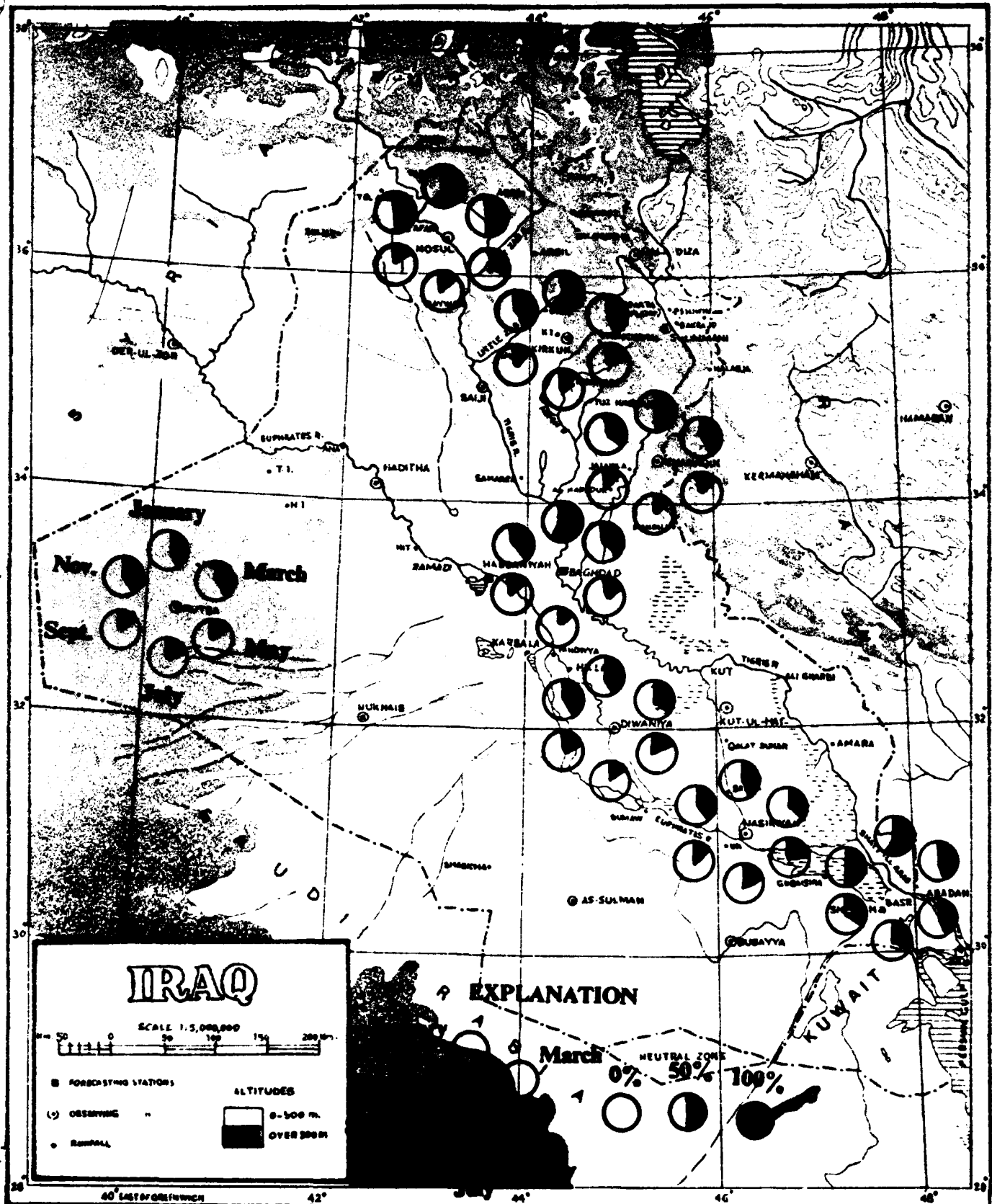




HUMIDITY

Mean Monthly Relative Humidity at 1200 GMT

124



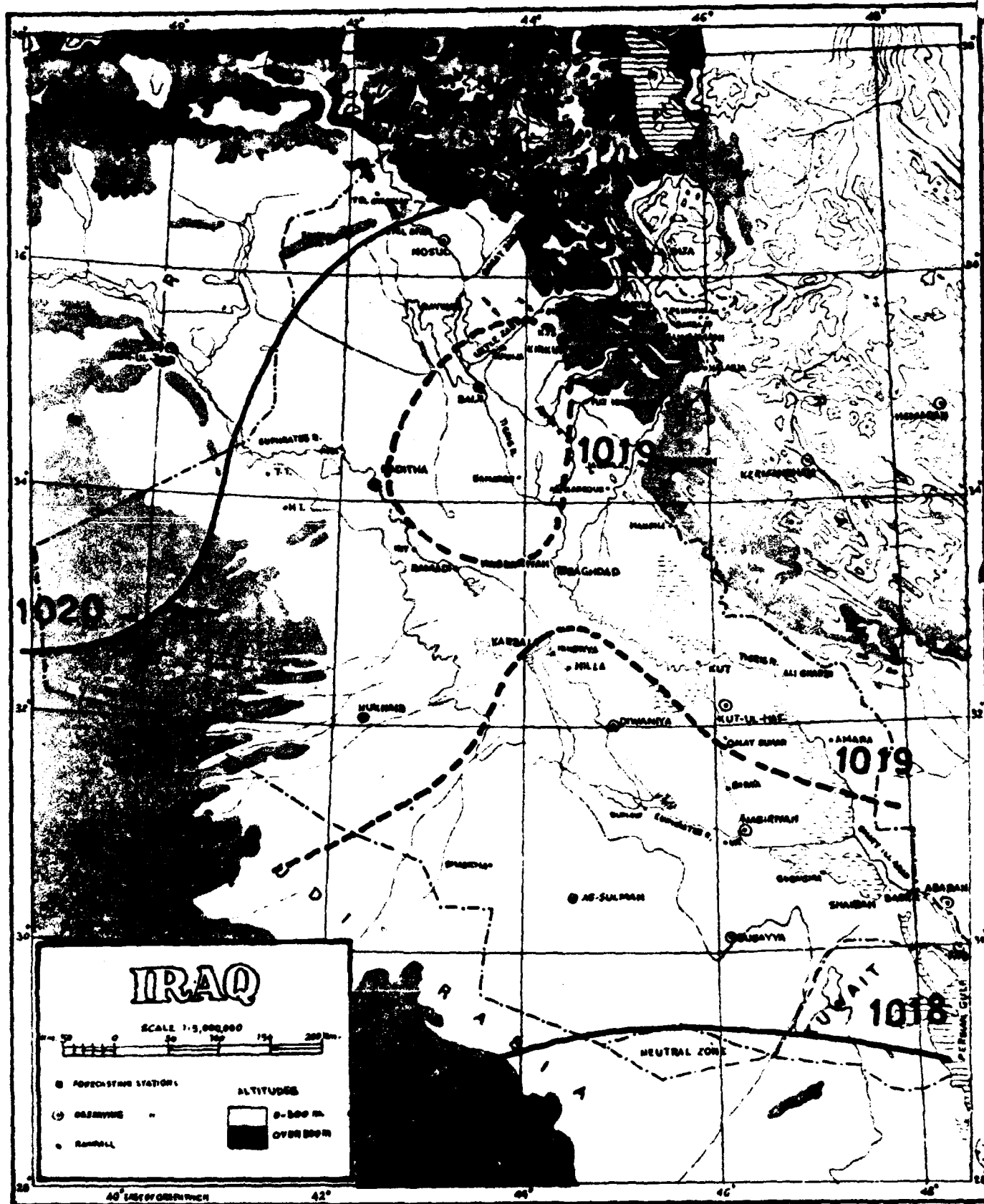
ATMOSPHERIC PRESSURE

Mean Monthly Sea Level Pressure

period of records see page 2/3

125

JANUARY



SURVEY PRESS BAGHDAD

MARCH



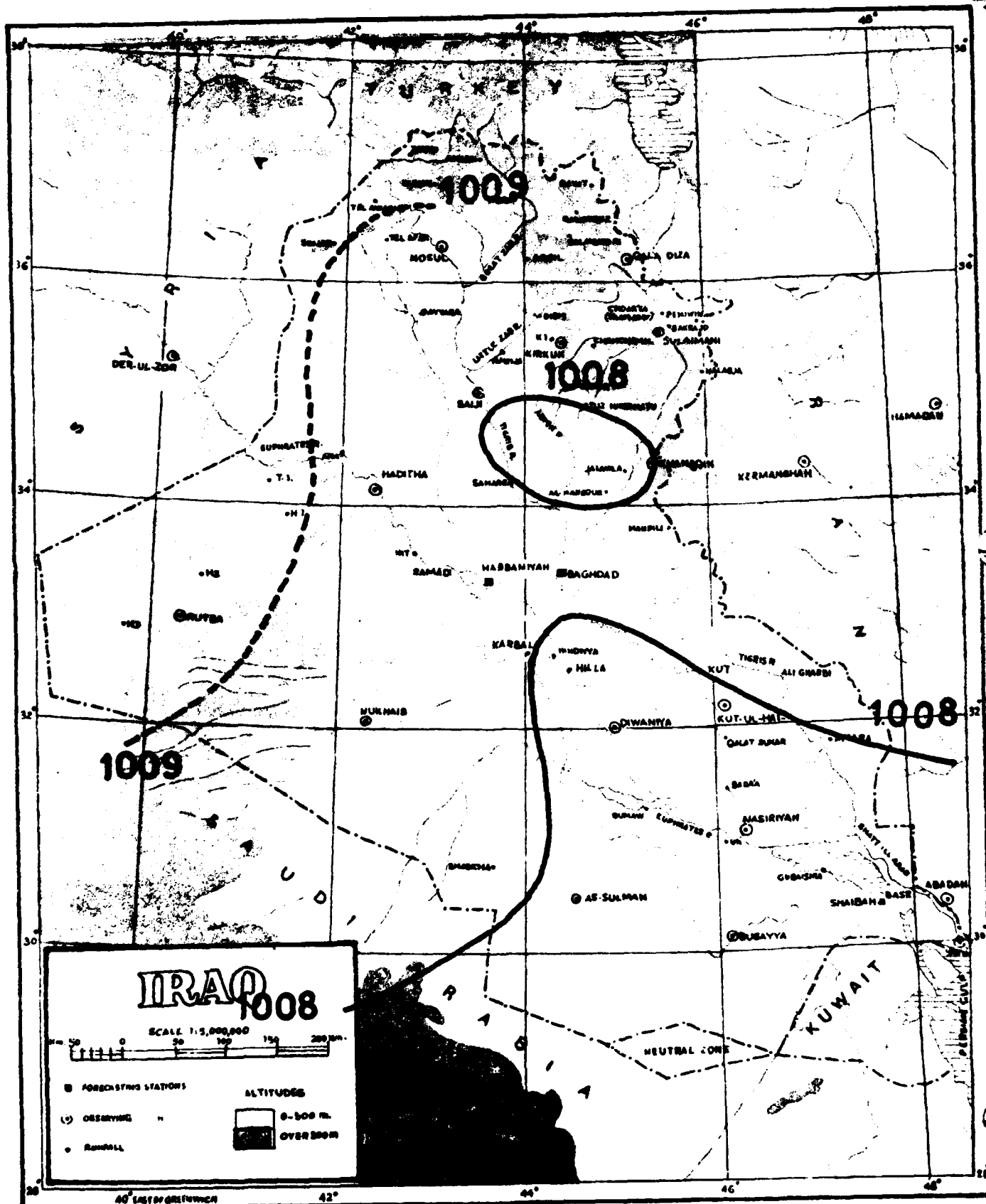
ATMOSPHERIC PRESSURE

Mean Monthly Sea Level Pressure

period of records see page 2/3

127

MAY



SURVEY PRESS. BAGHDAD

JULY

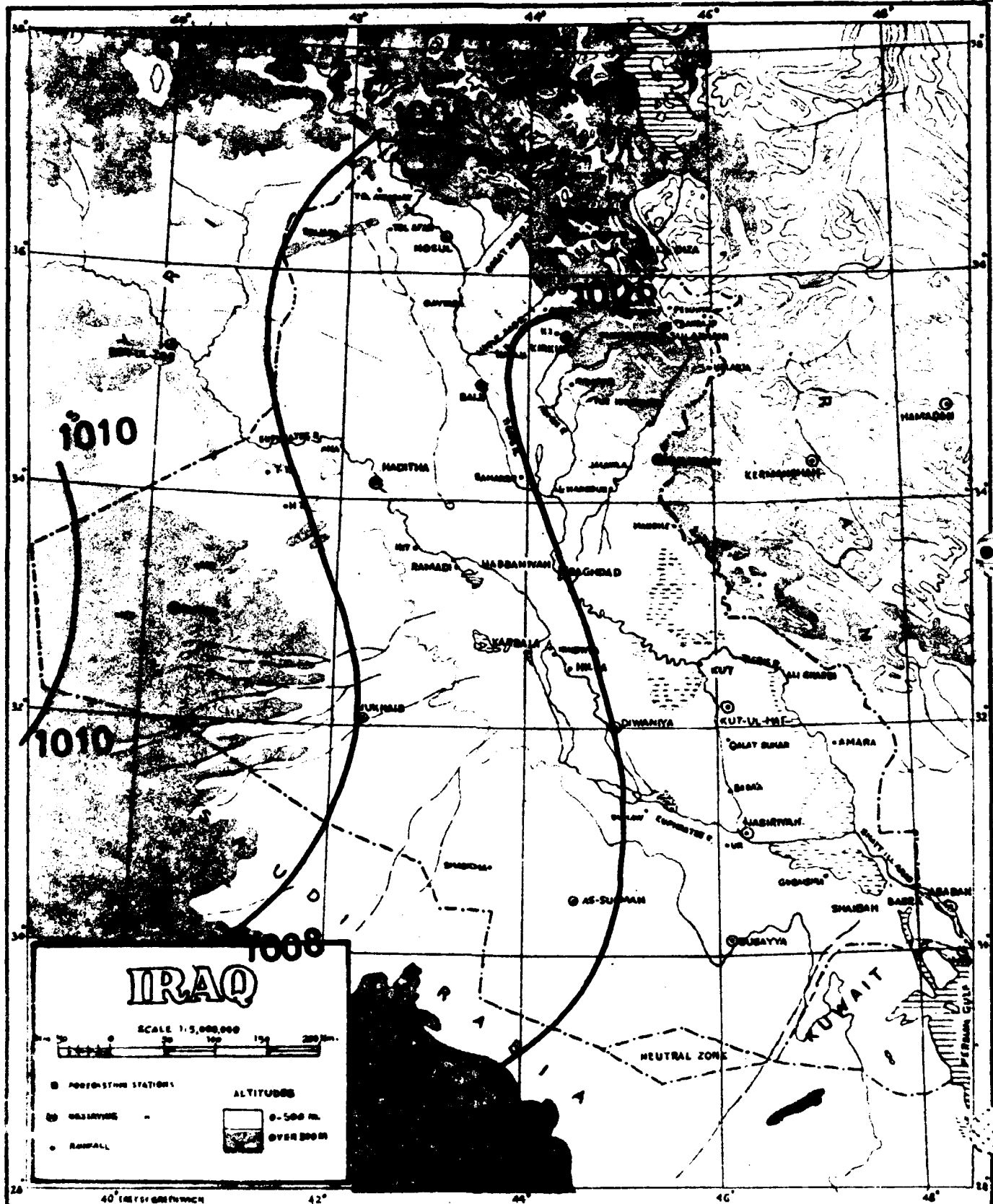


ATMOSPHERIC PRESSURE

Mean Monthly Sea Level Pressure
period of records see page 2/3

129

SEPTEMBER

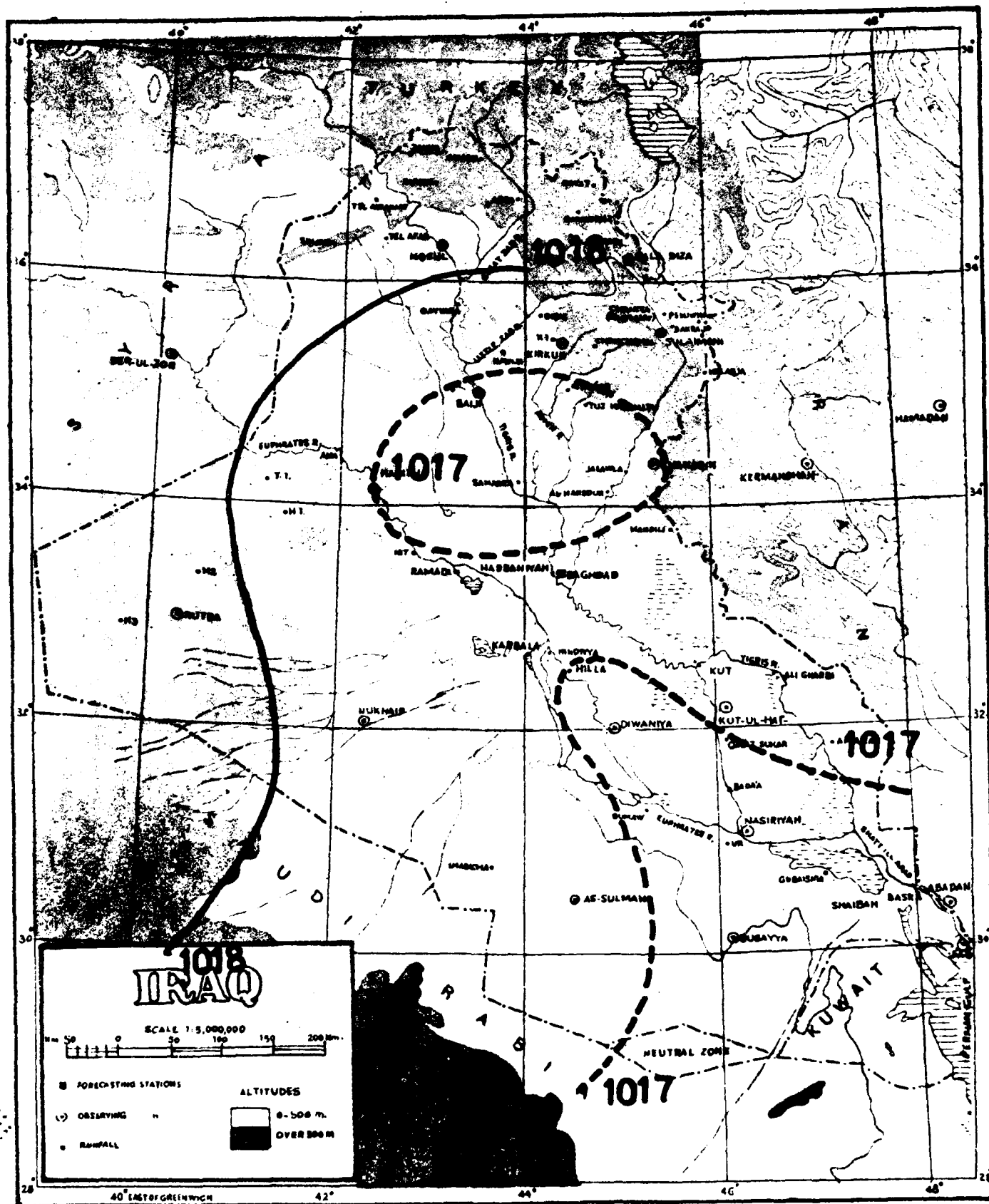


ATMOSPHERIC PRESSURE

Mean Monthly Sea Level Pressure
period of records see page 2/3

130

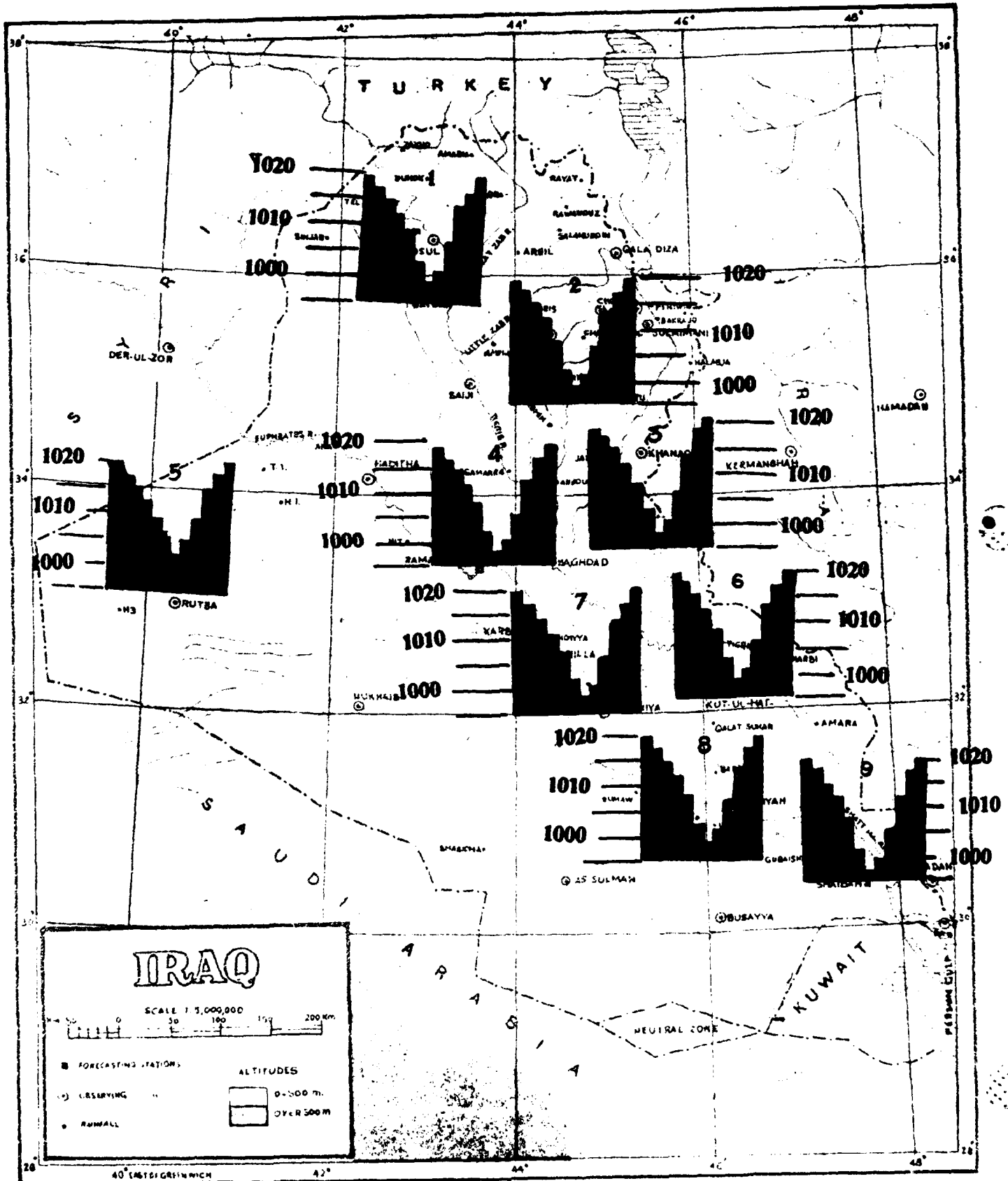
NOVEMBER



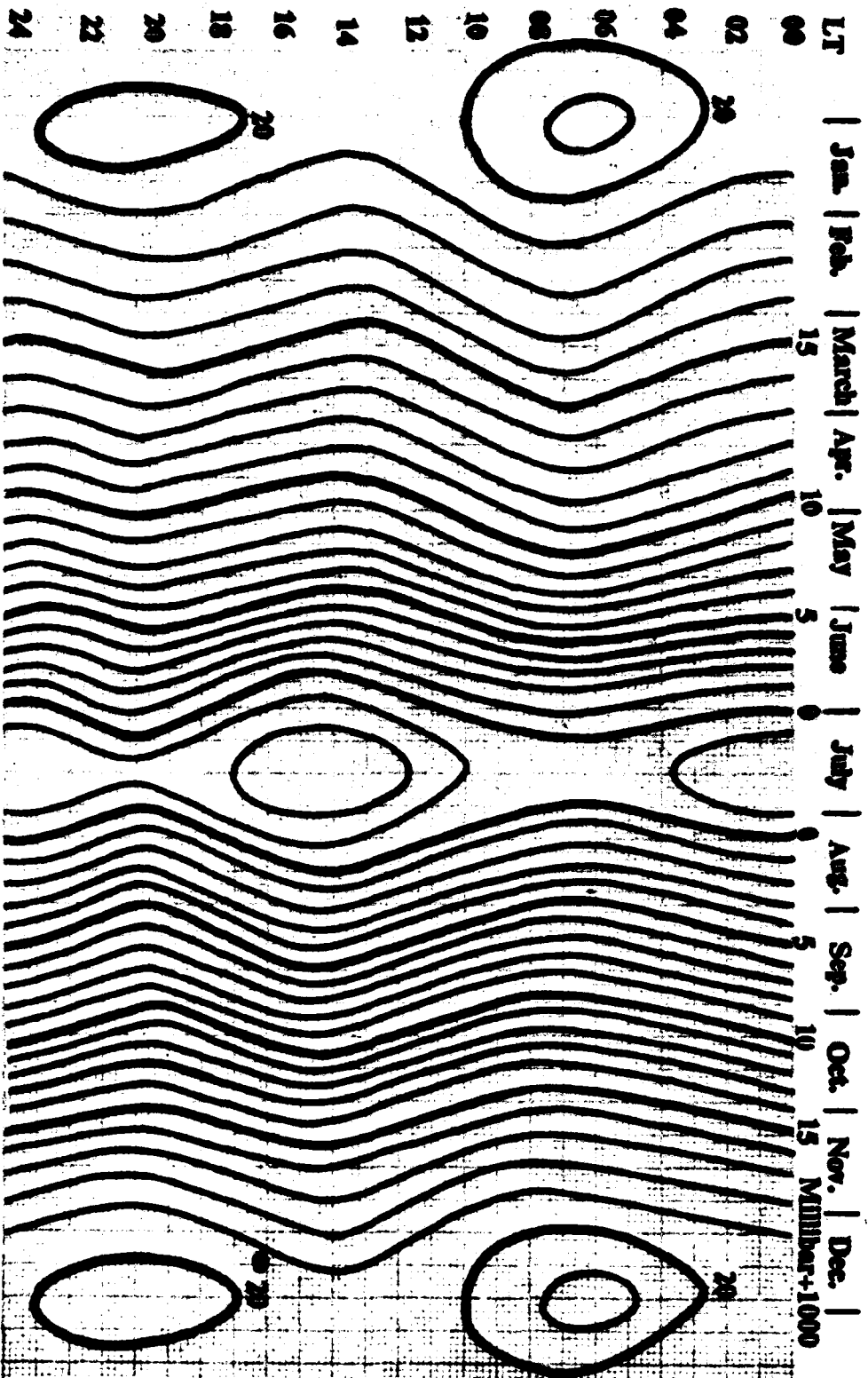
ATMOSPHERIC PRESSURE

Mean Monthly Sea Level Pressure

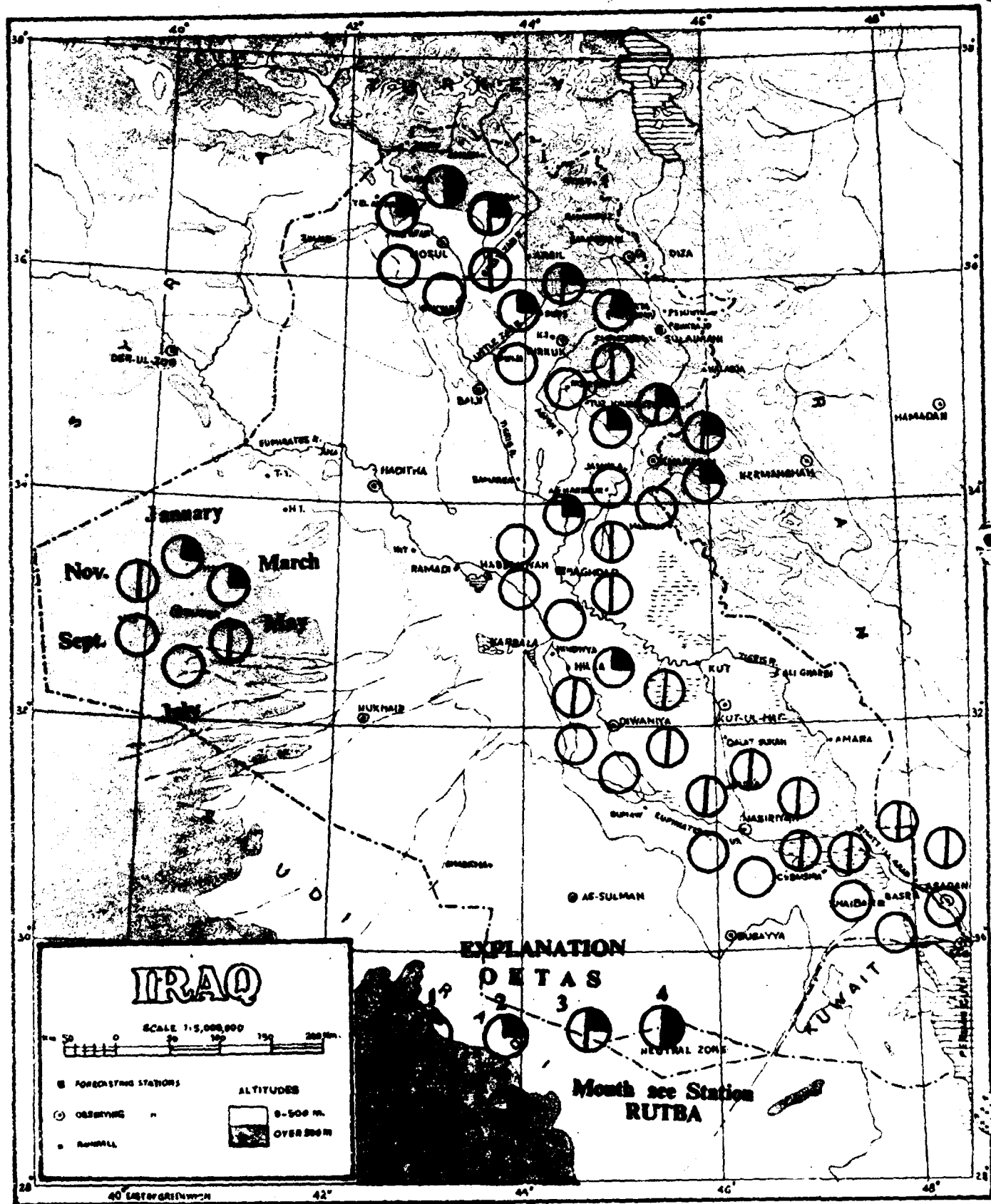
Each Column Represents One Month Starting with January (Left)
period of records see page 2/3



SURVEY PRESS BAGHDAD



133



SURVEY PRESS, BASHNOO



135

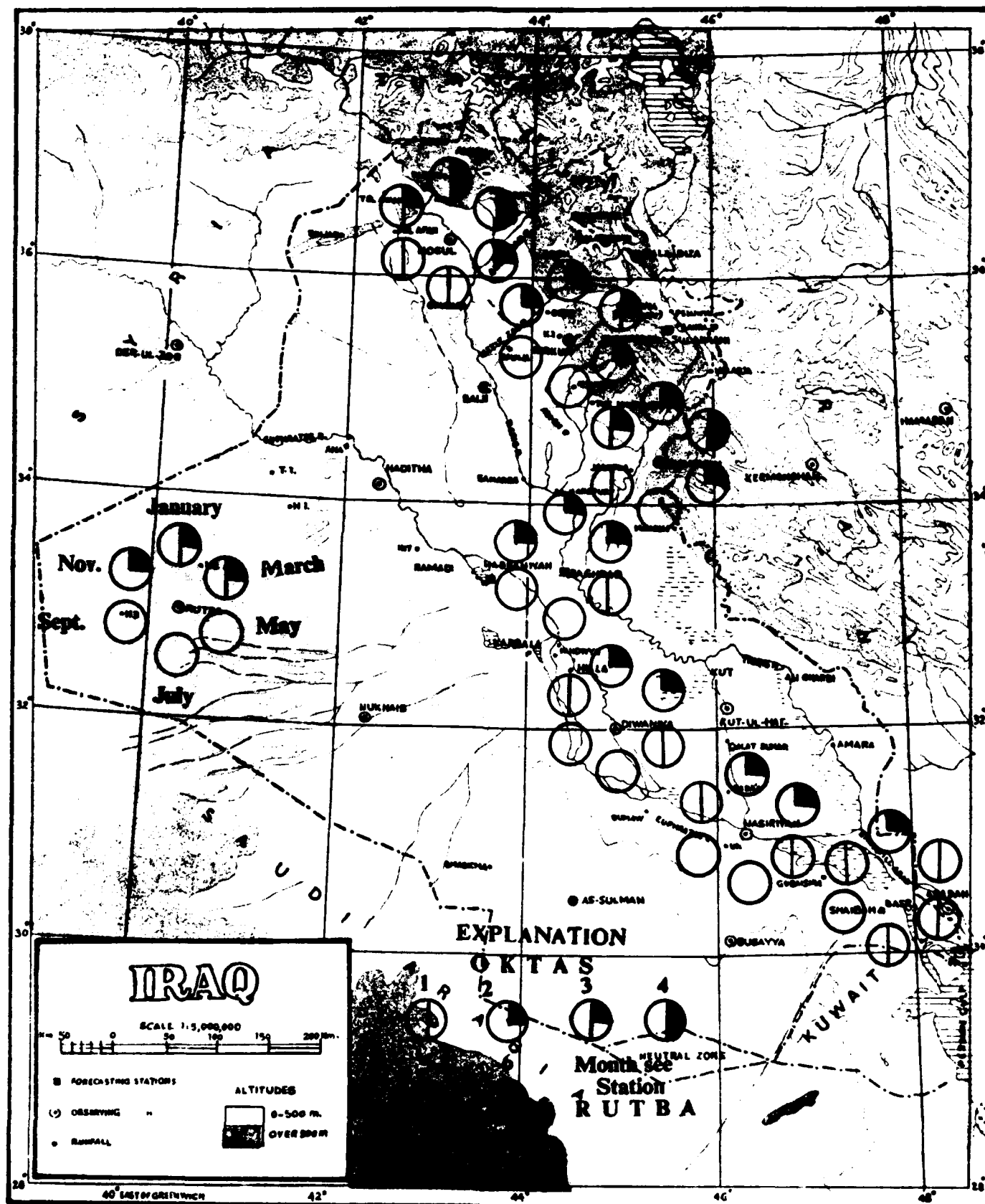




CLOUDINESS

Mean Monthly Amount of Low Clouds
at 1200 GMT (Base below 2500 m)
to the nearest Okta

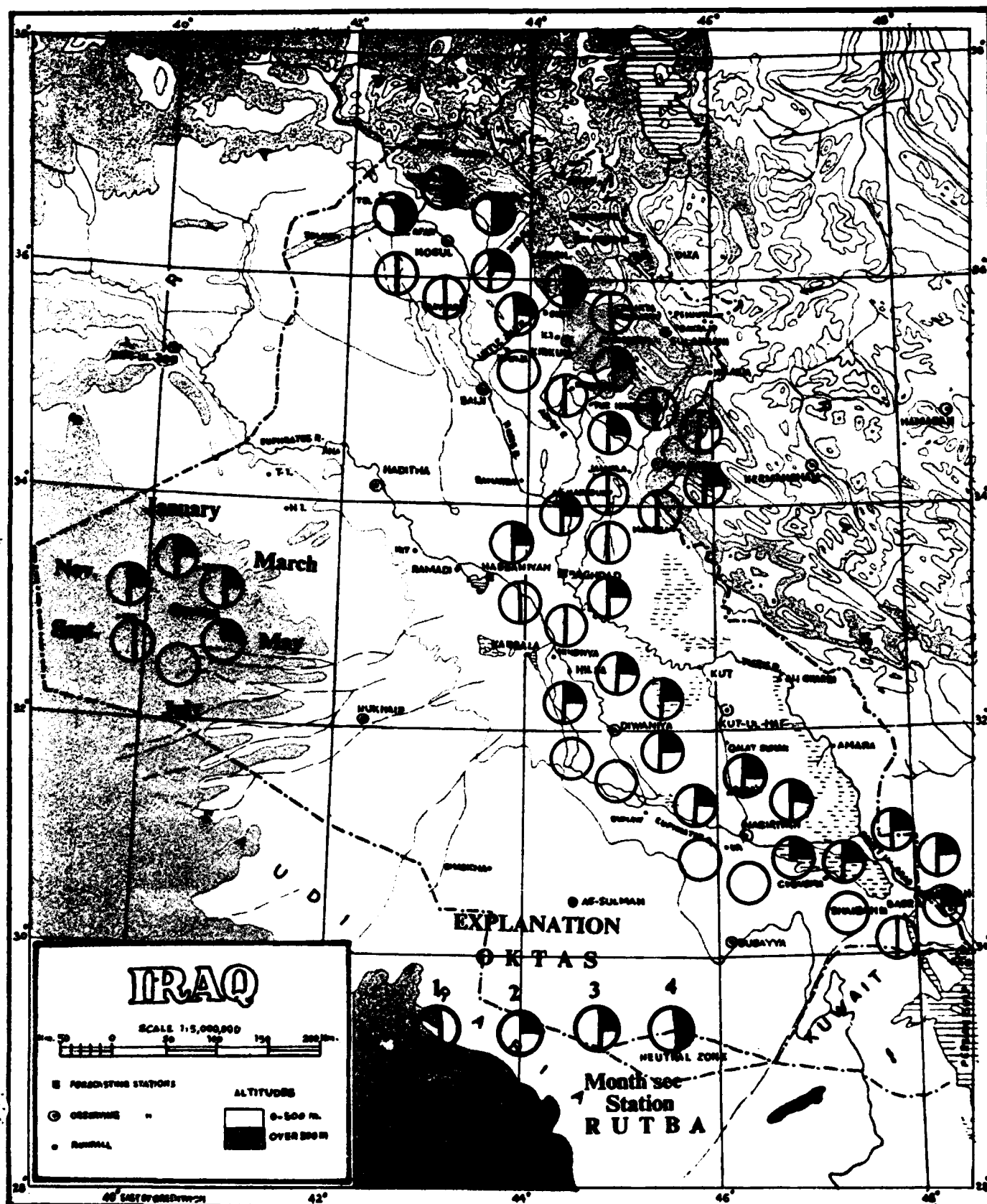
137



CLOUDINESS

Mean Monthly Amount of Total Clouds
at 0300 GMT
to the nearest Oktas

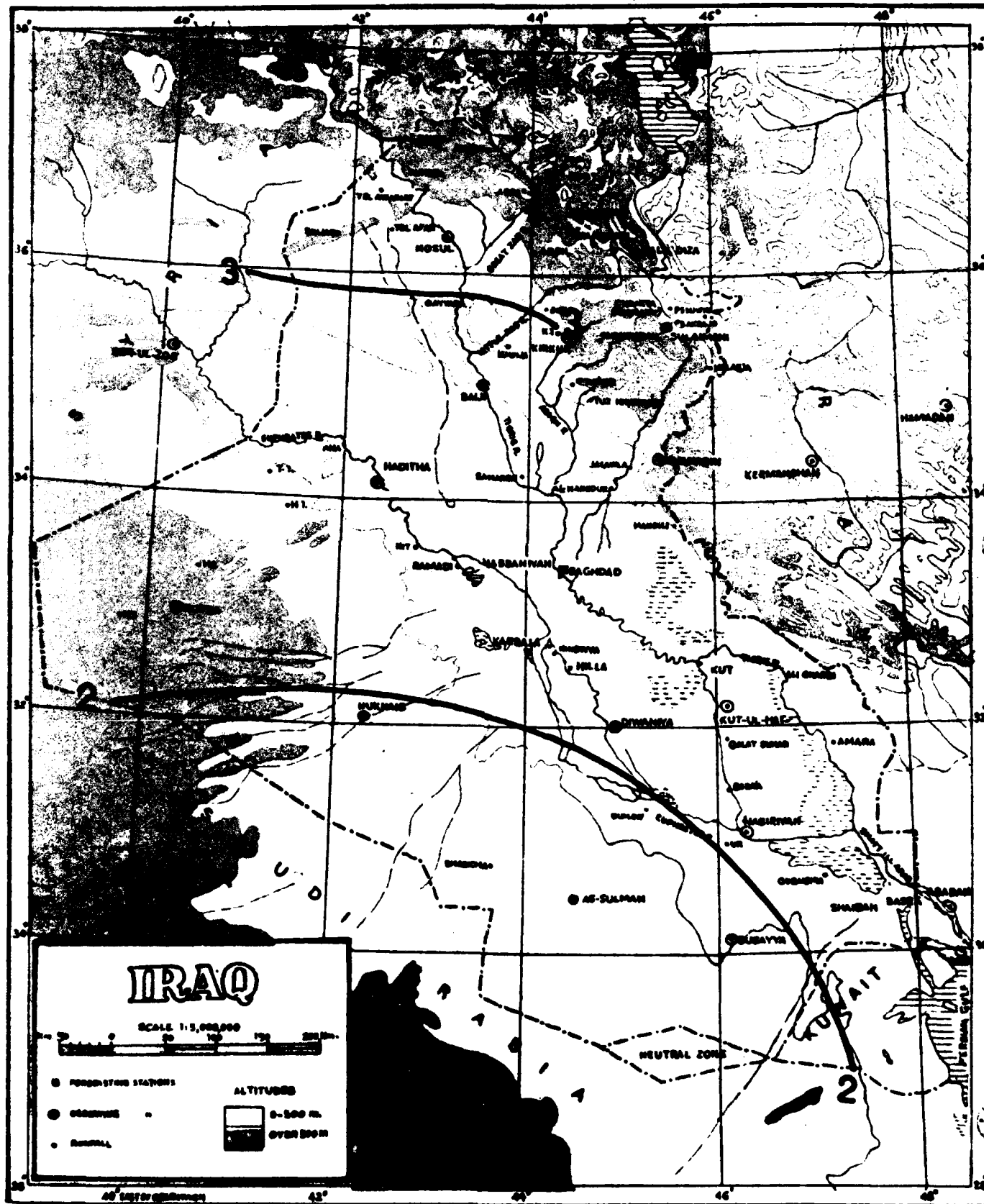
138



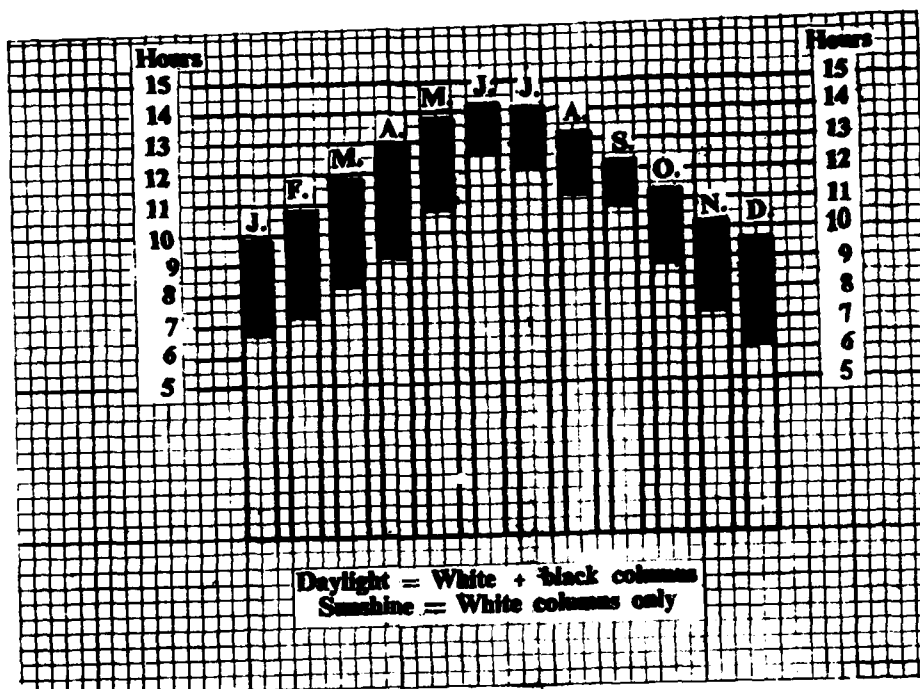
CLOUDINESS

Mean Annual Amount of Total Clouds
Oktas
period of records see page 2/3

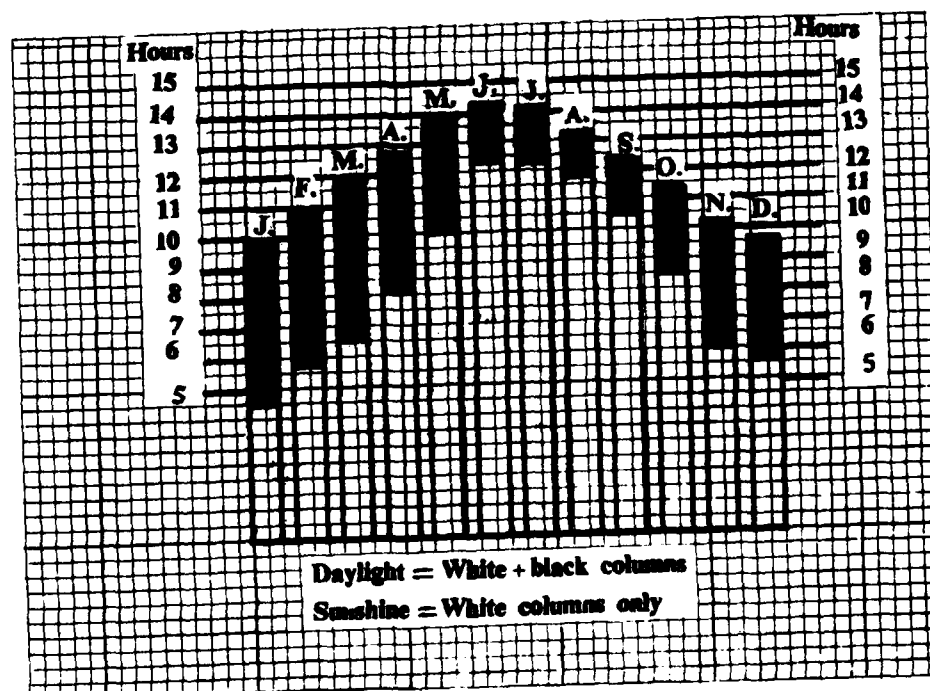
139



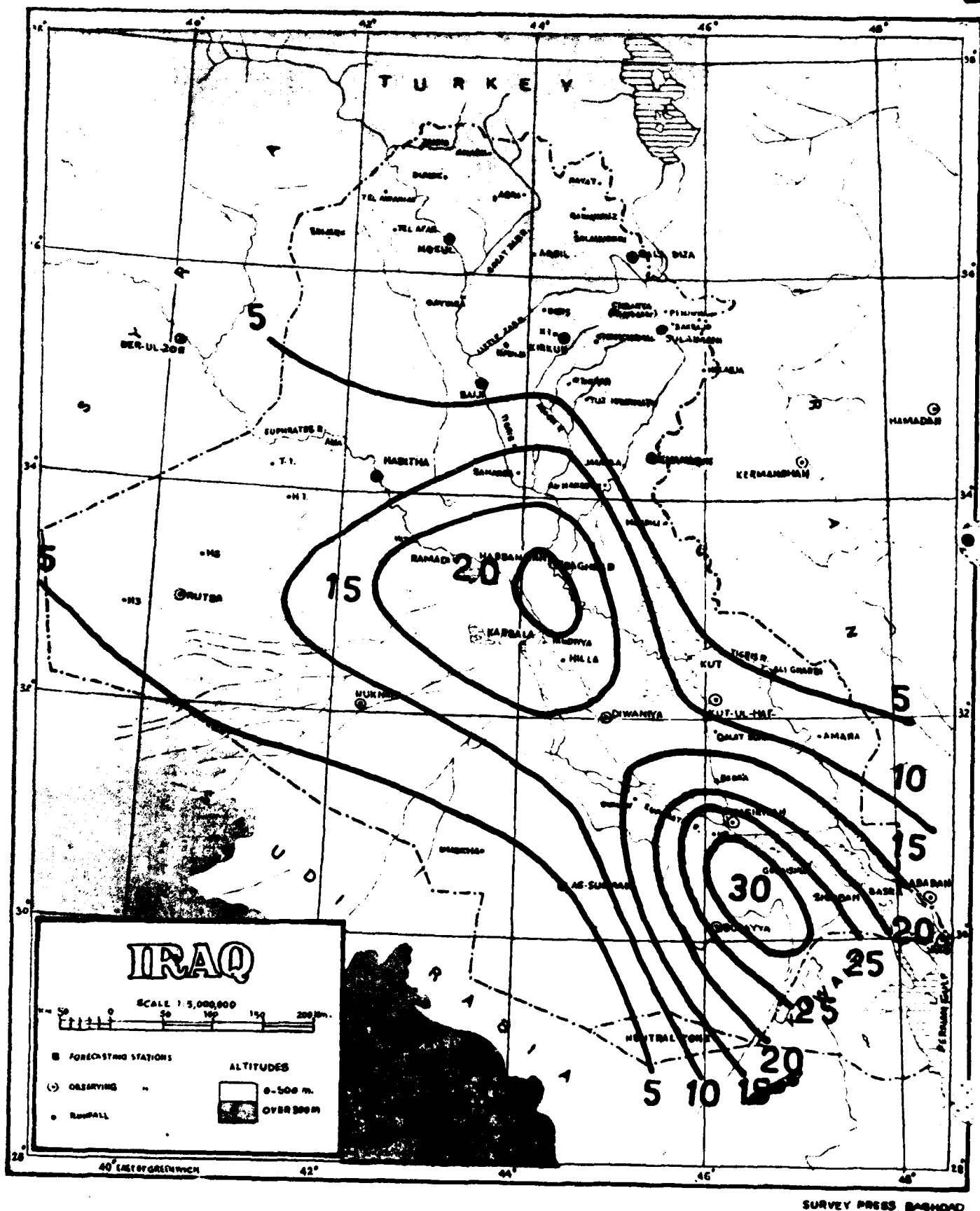
Mean Duration of Daylight and Mean Hours of Sunshine
Observed for Each Month of the Year at Baghdad Airport
(Period of observations 1937—1956)



Mean Duration of Daylight and Mean Hours of Sunshine
Observed for Each Month of the Year at Mosul Airport
(Period of observations 1938—1956)



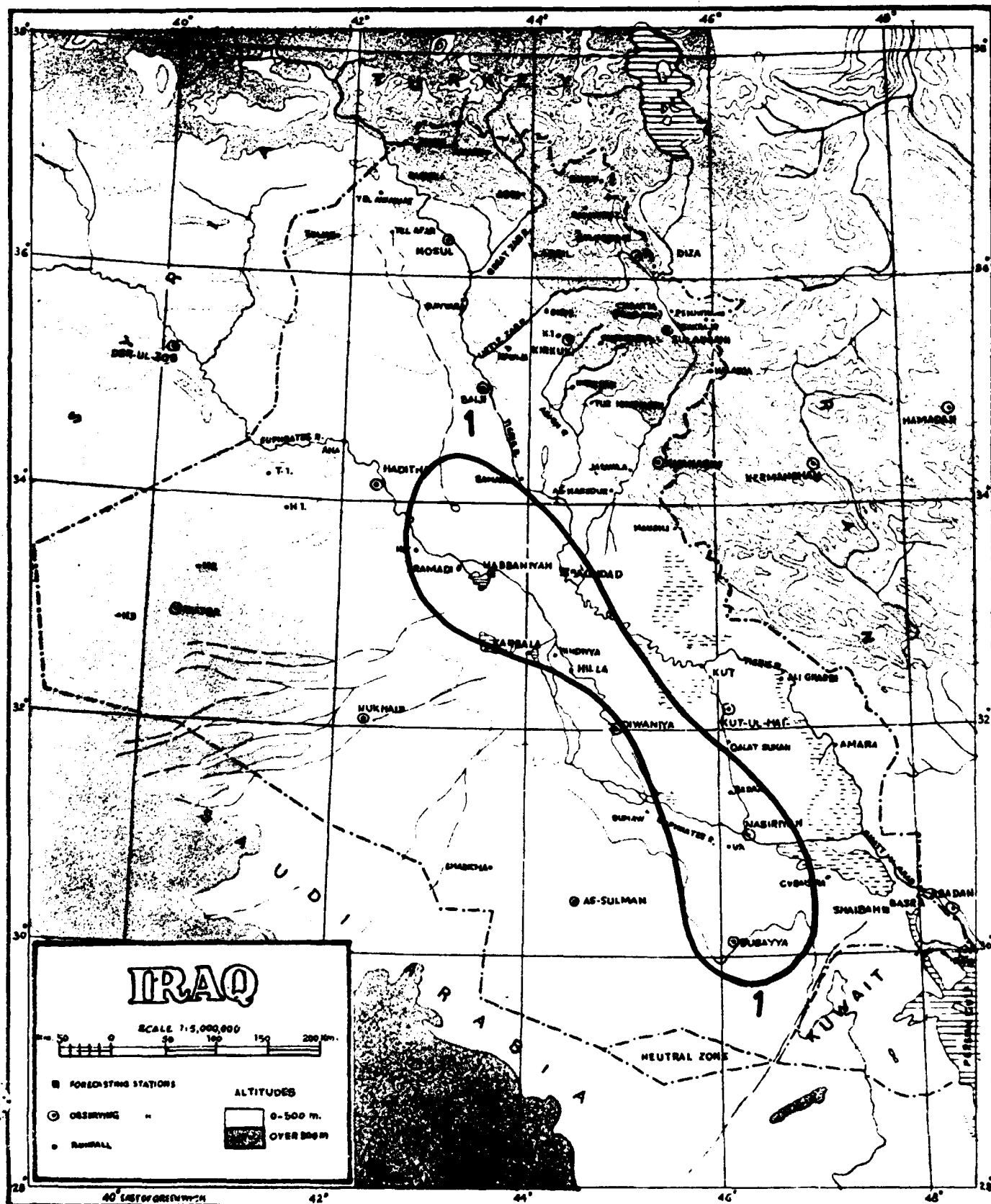
141



D U S T
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

142

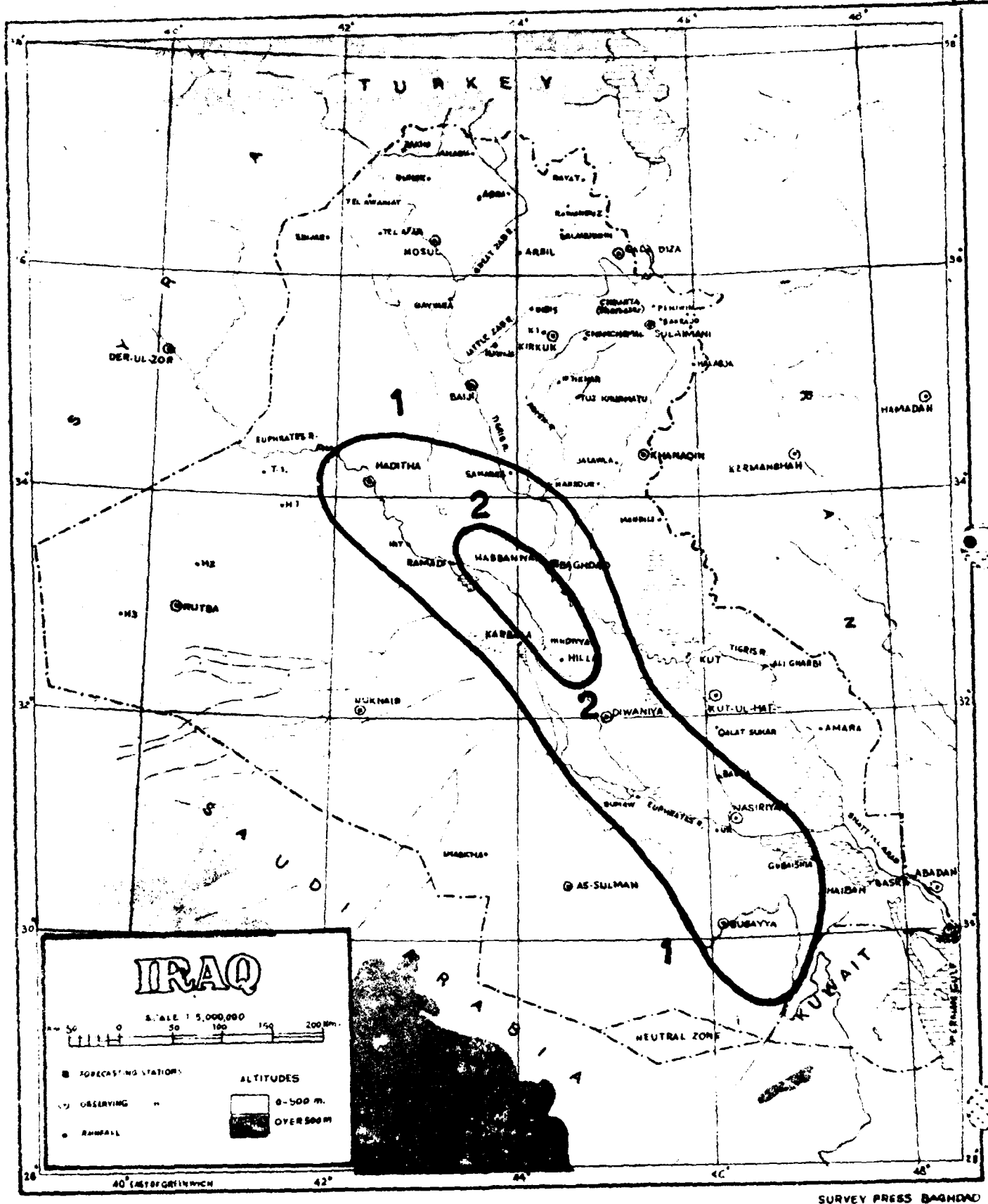
JANUARY



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

143

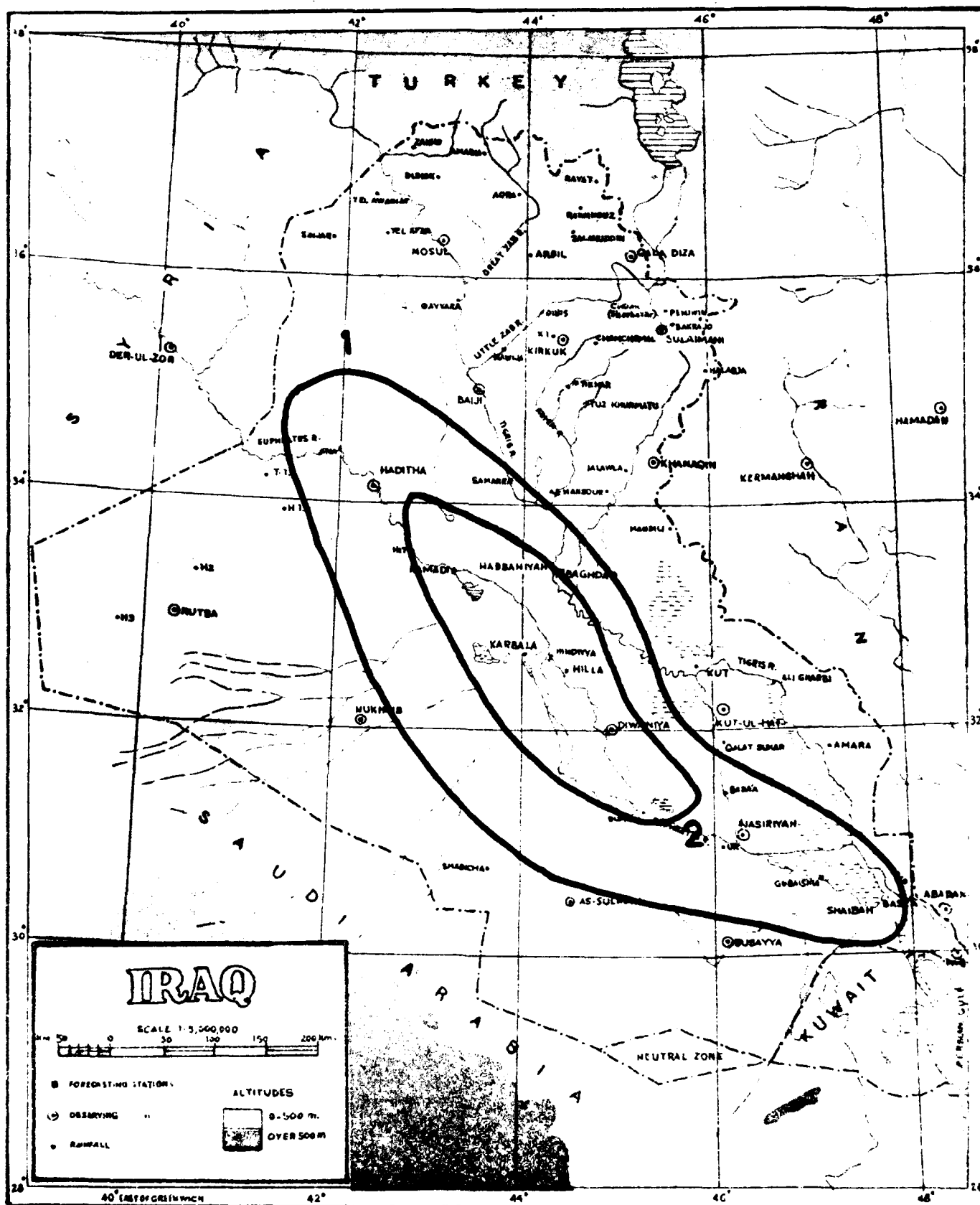
FÉBRUARY



D U S T
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

144

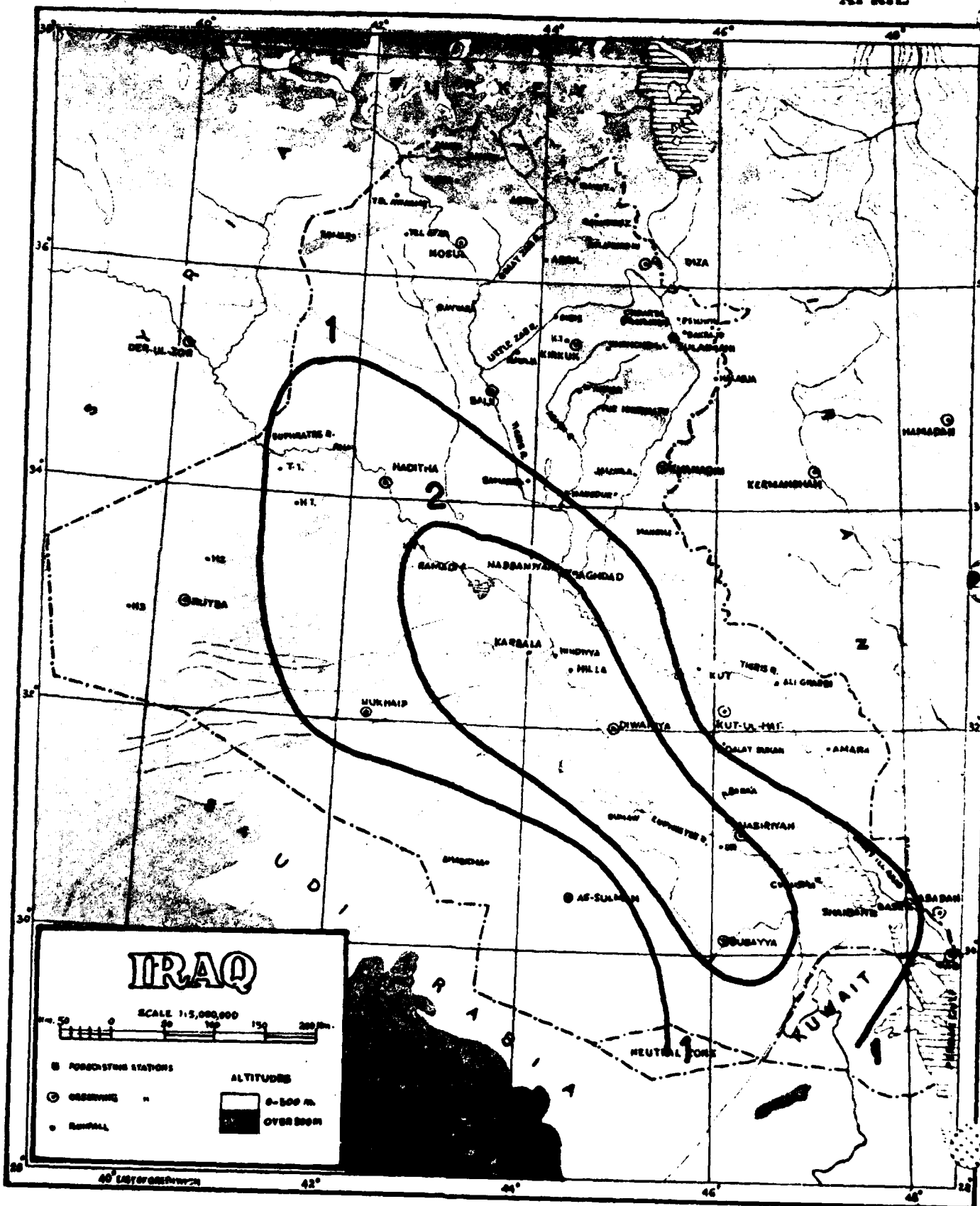
MARCH



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

145

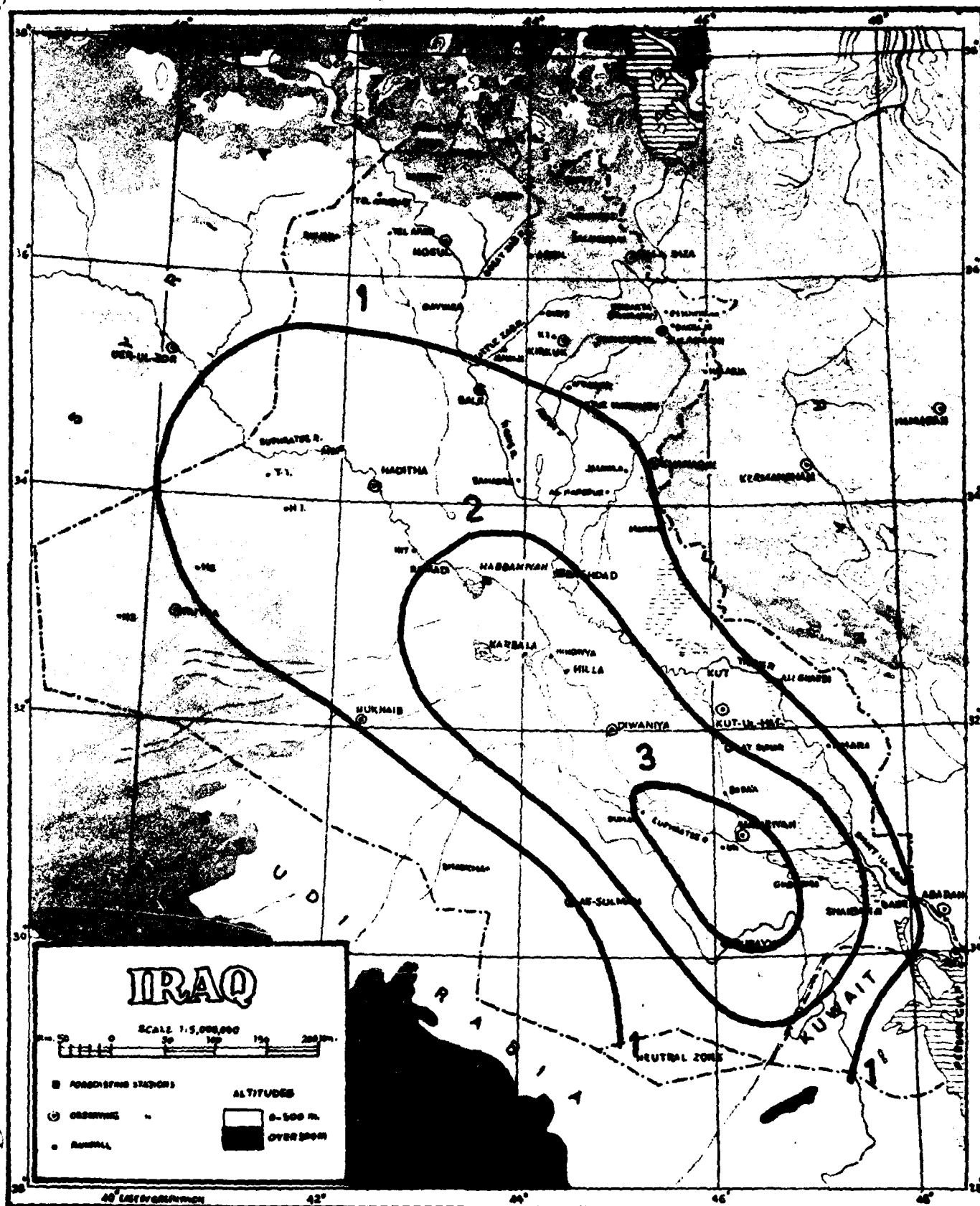
APRIL



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

146

MAY



SURVEY PRESS. BAGHDAD

147

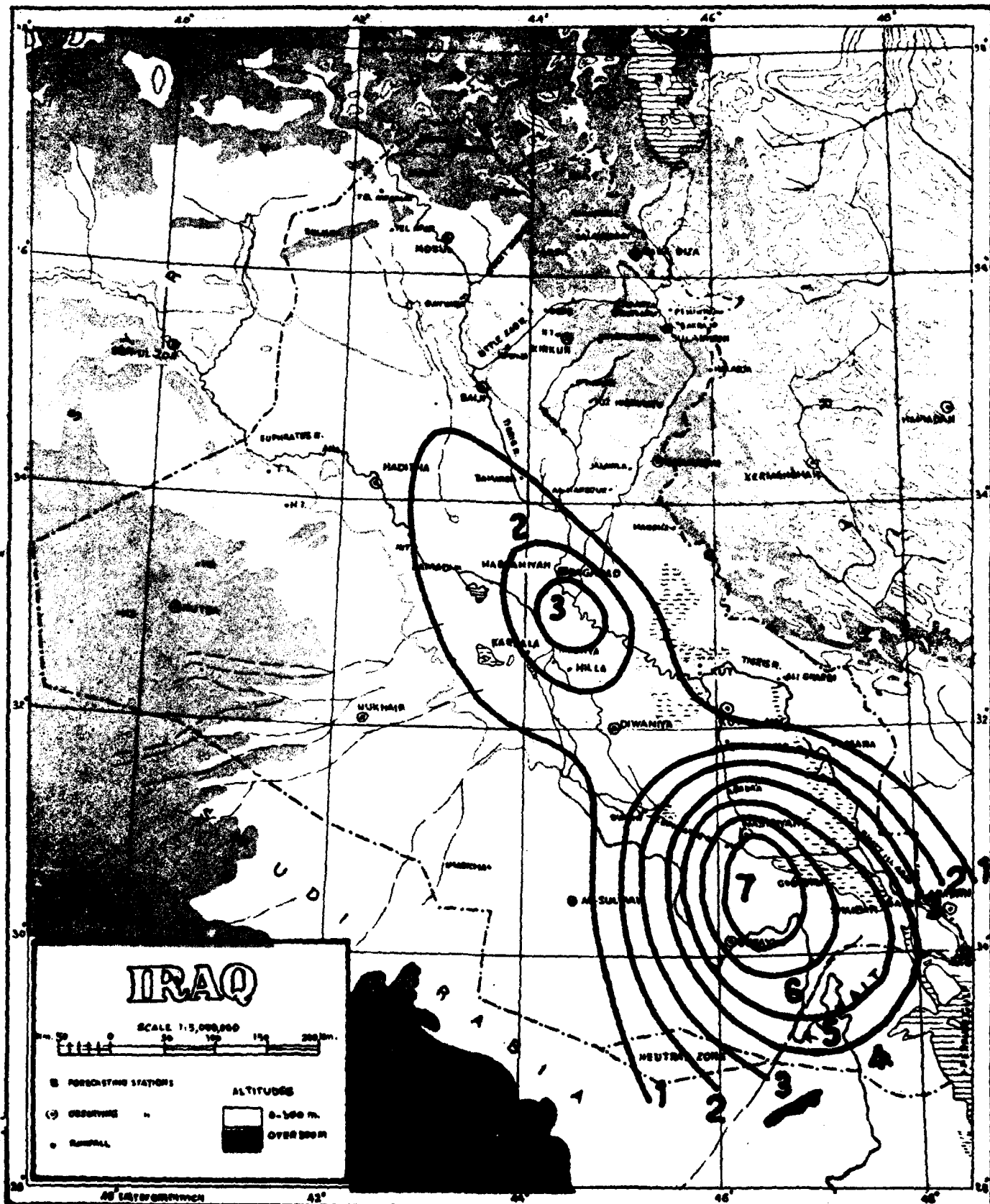
JUNE



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 period of records see page 2/3

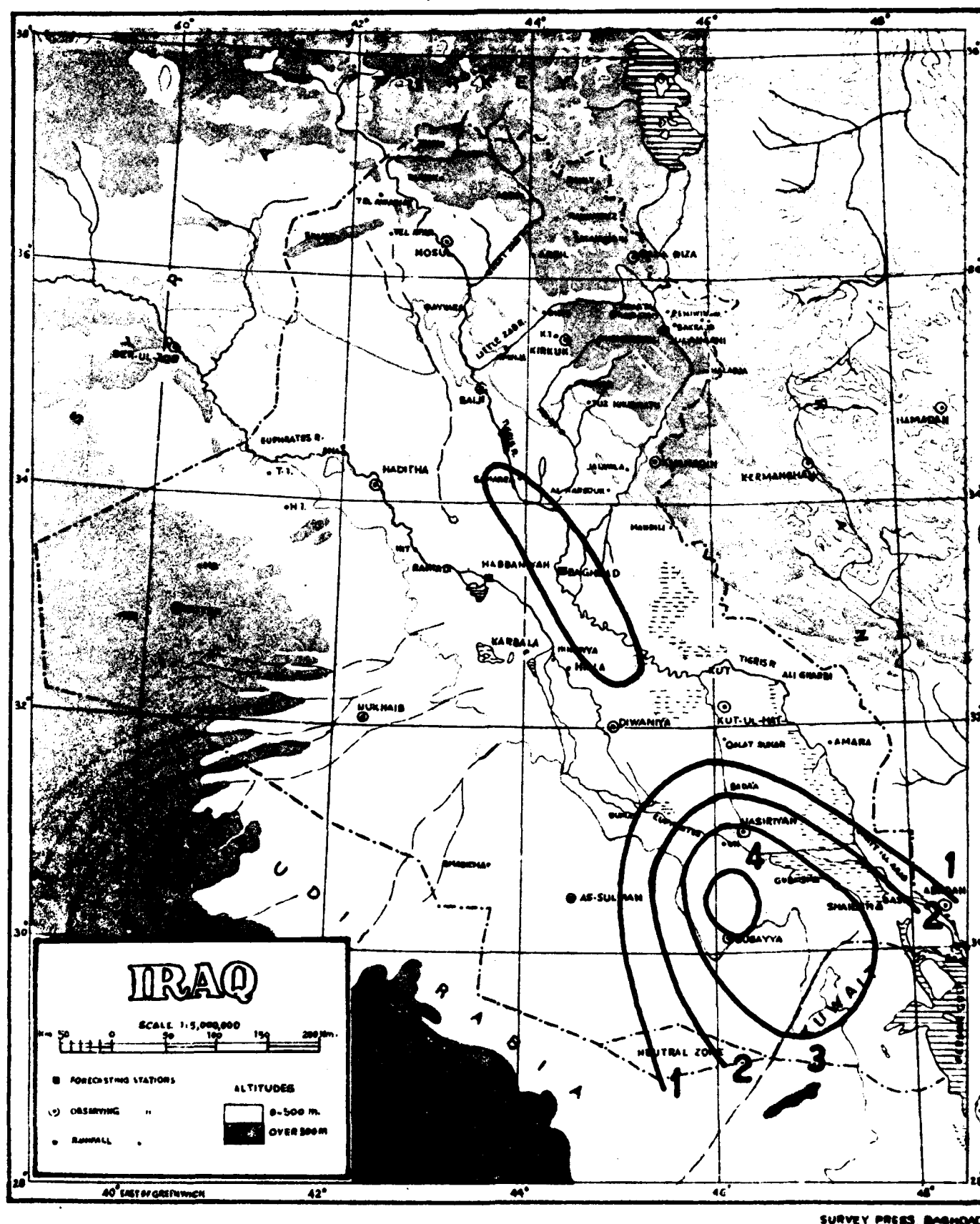
148

JULY



149

AUGUST

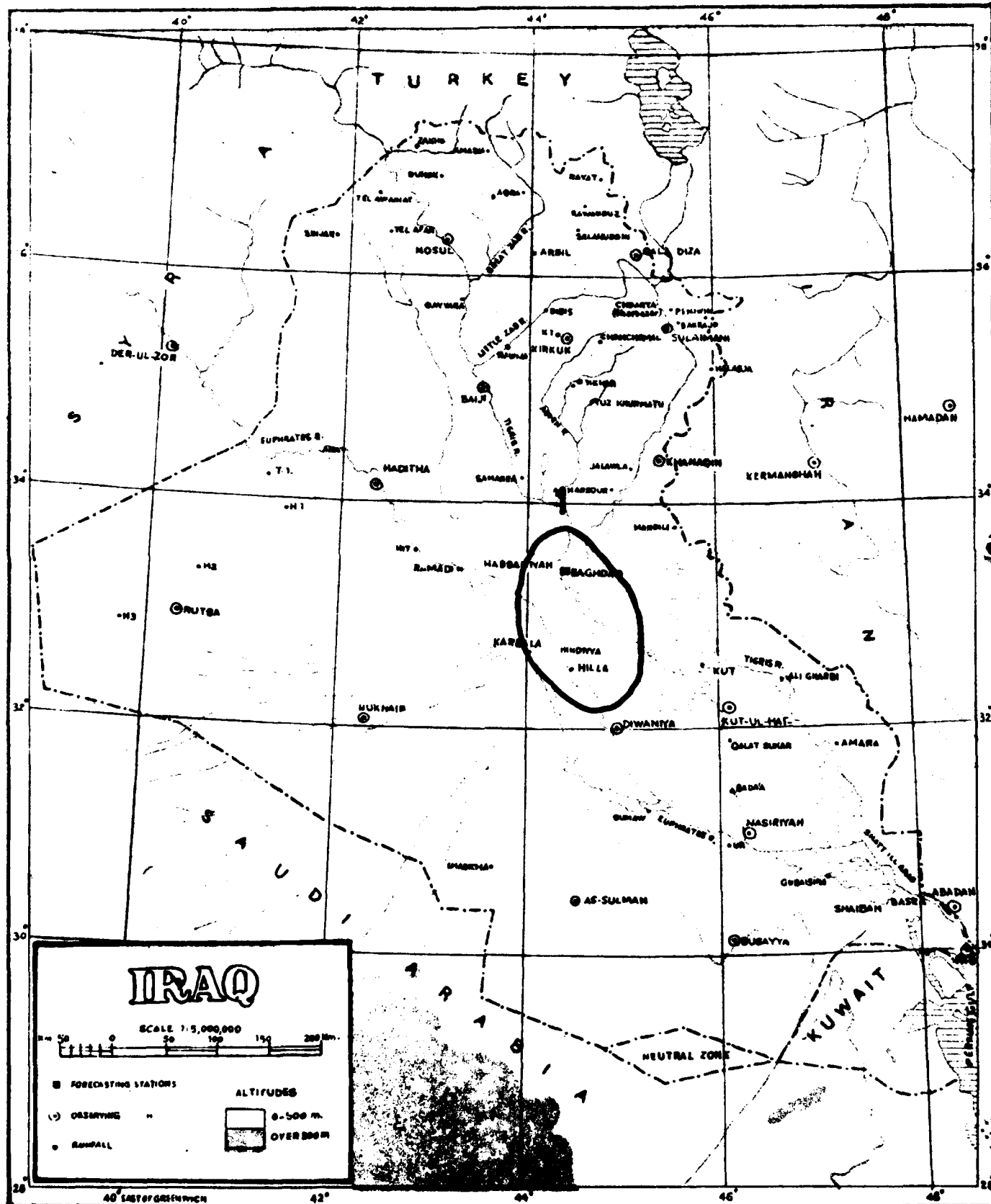


150

D U S T
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 Period of records see page 2-3

151

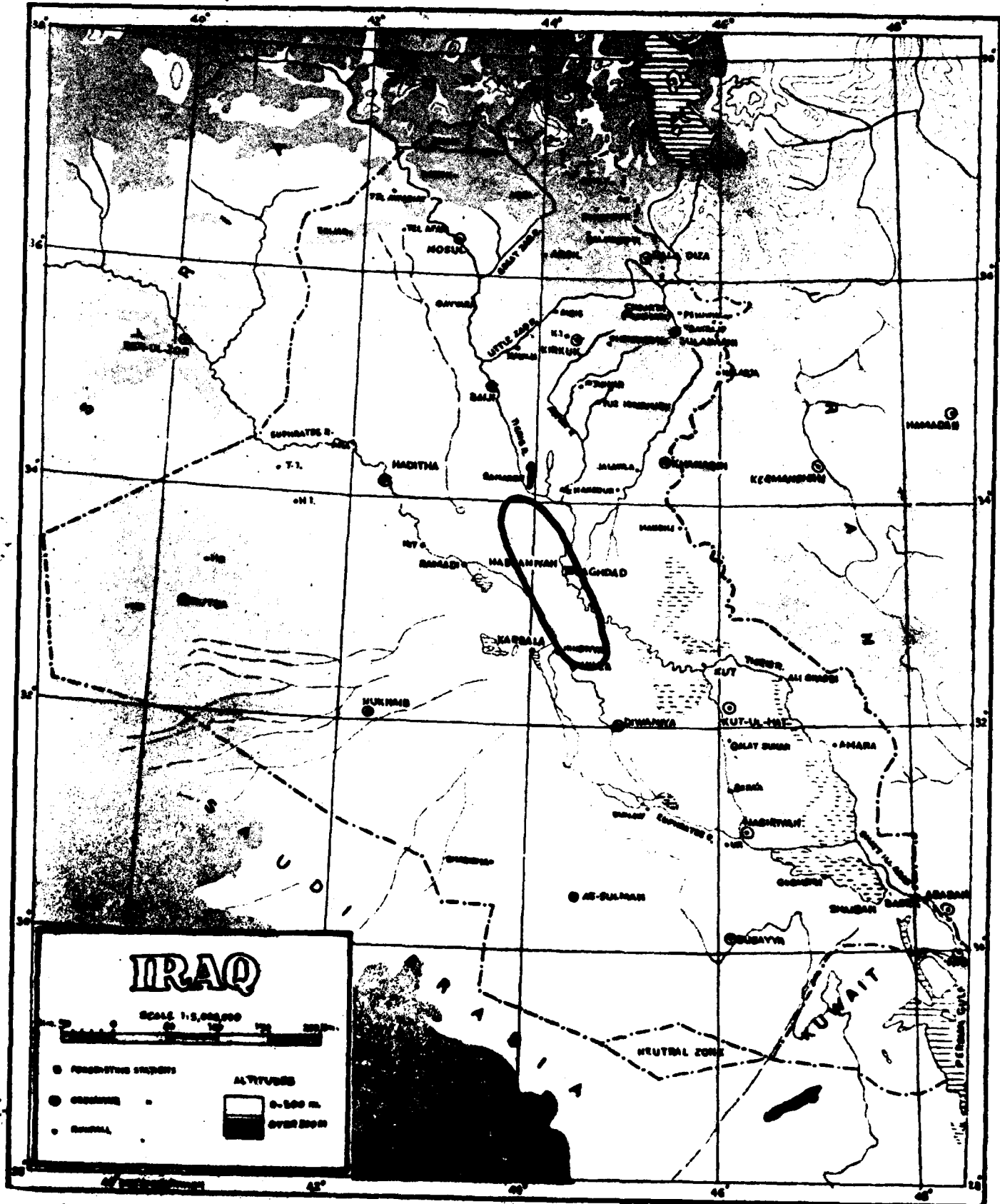
OCTOBER



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 Period of records see page 2-3

152

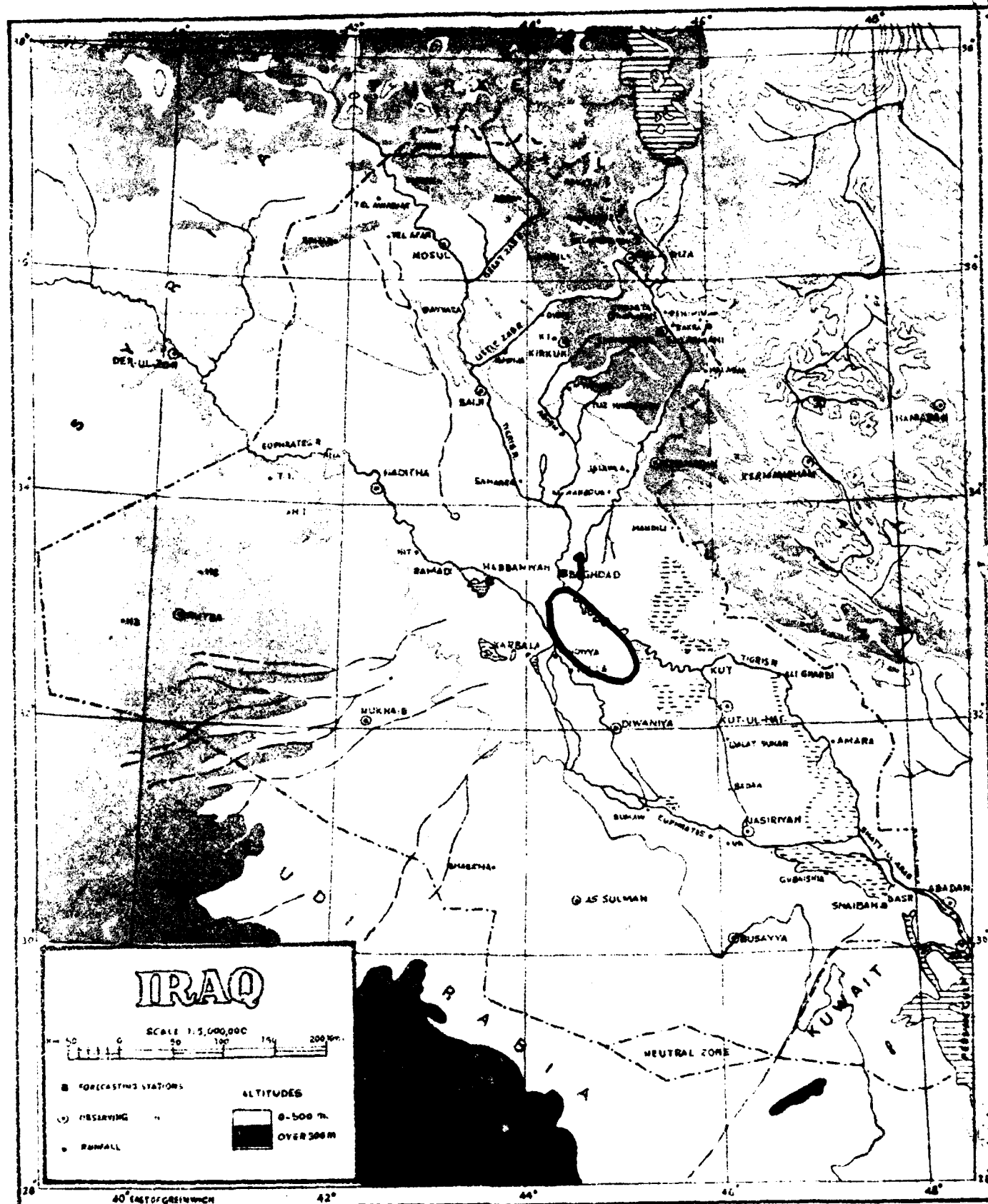
NOVEMBER



DUST
 (Visibility less than 1 Km)
 Mean Monthly Number of Days with Dust
 Period of records see page 2-3

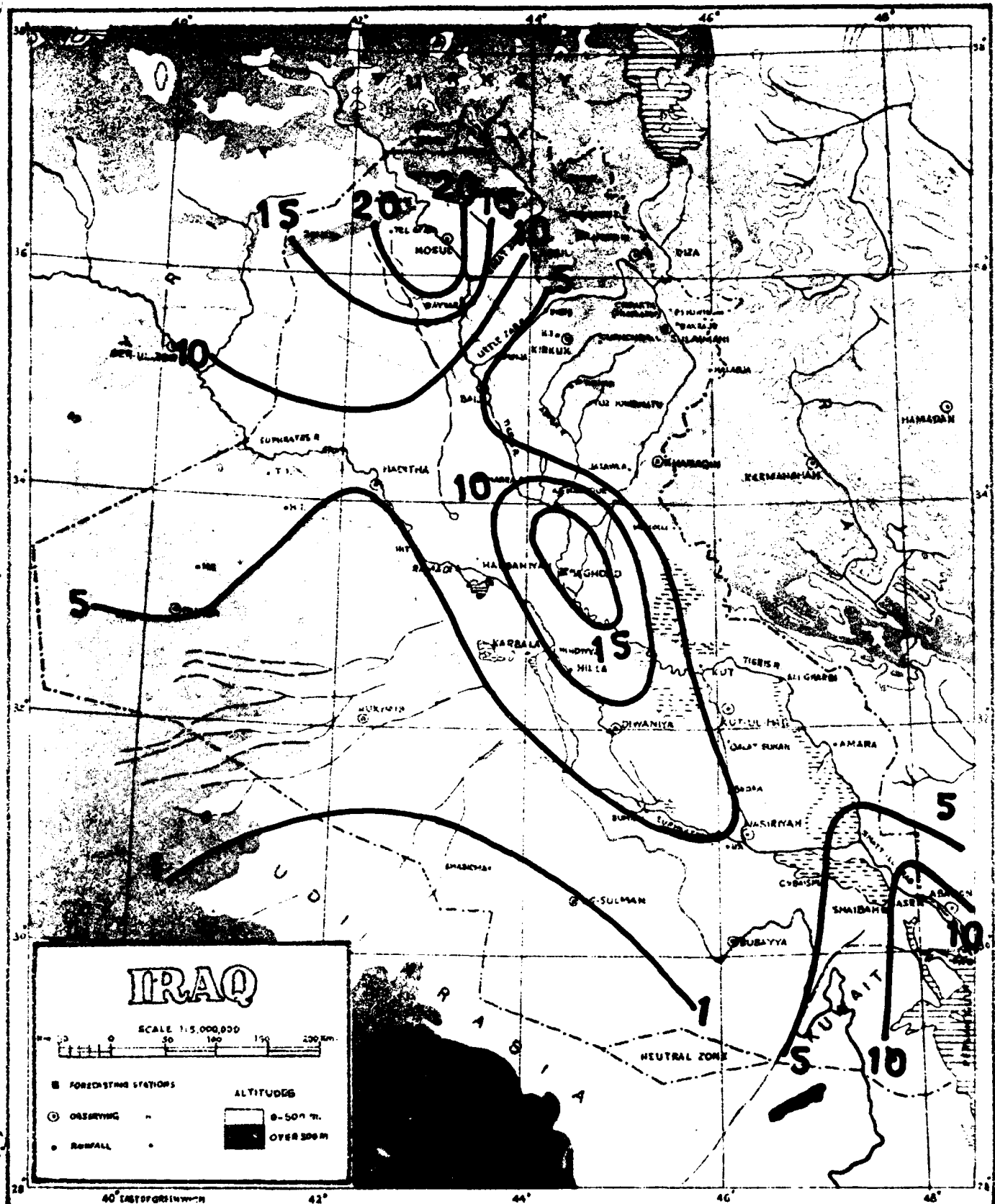
153

DECEMBER



F O G **Mean Annual Number of Days with Fog** **Period of Records see Page 2-3**

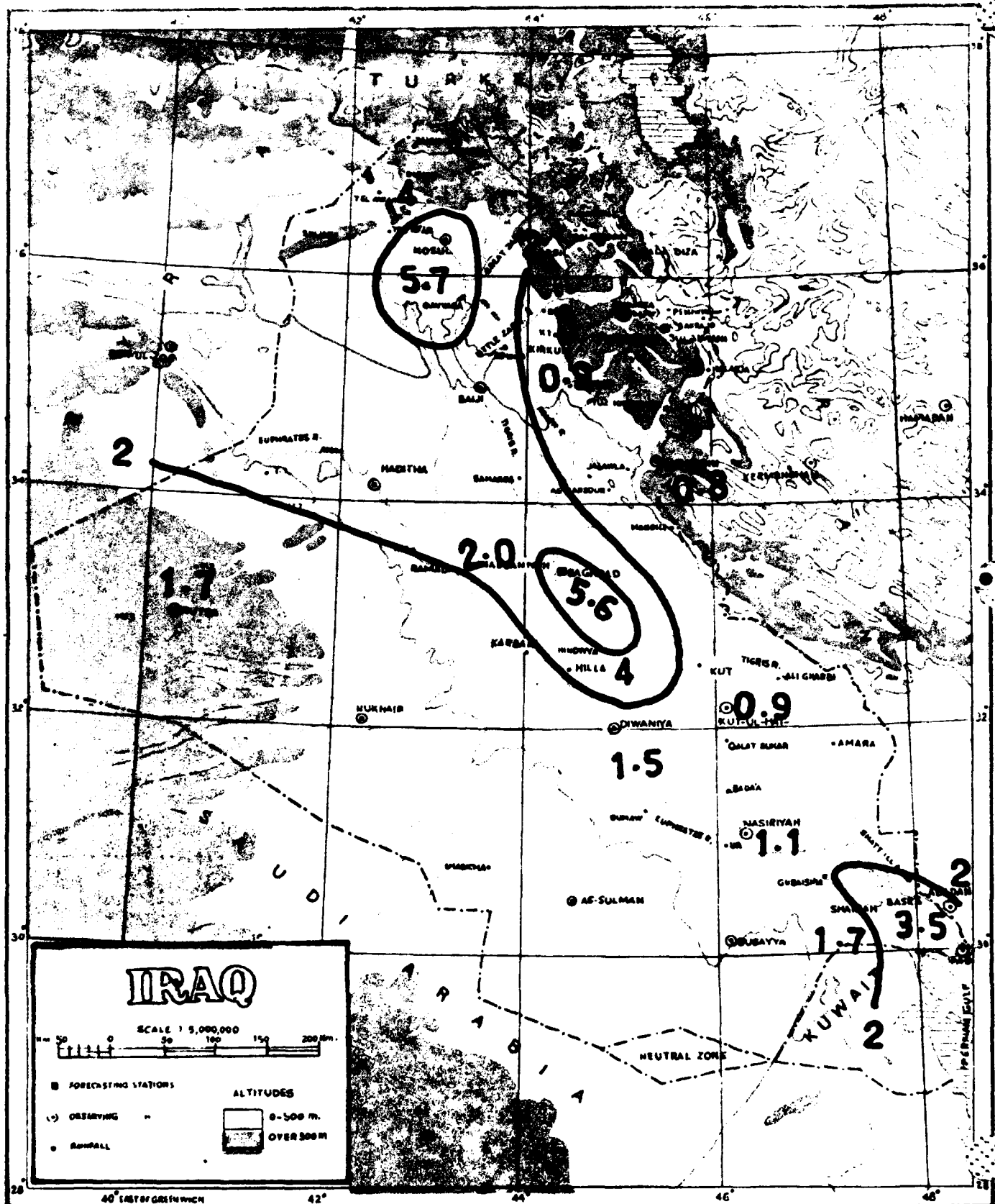
154



FOG **Mean Monthly Number of Days with Fog** period of records see page 2/3

155

JANUARY



156

IRAQ

SCALE 1:5,000,000

0 50 100 150 200 Km.

● FORESTATION STATIONS
 ○ OBSERVING STATIONS
 • RAILROAD

ALTITUDES
 0-500 m.
 OVER 500m

NEUTRAL ZONE

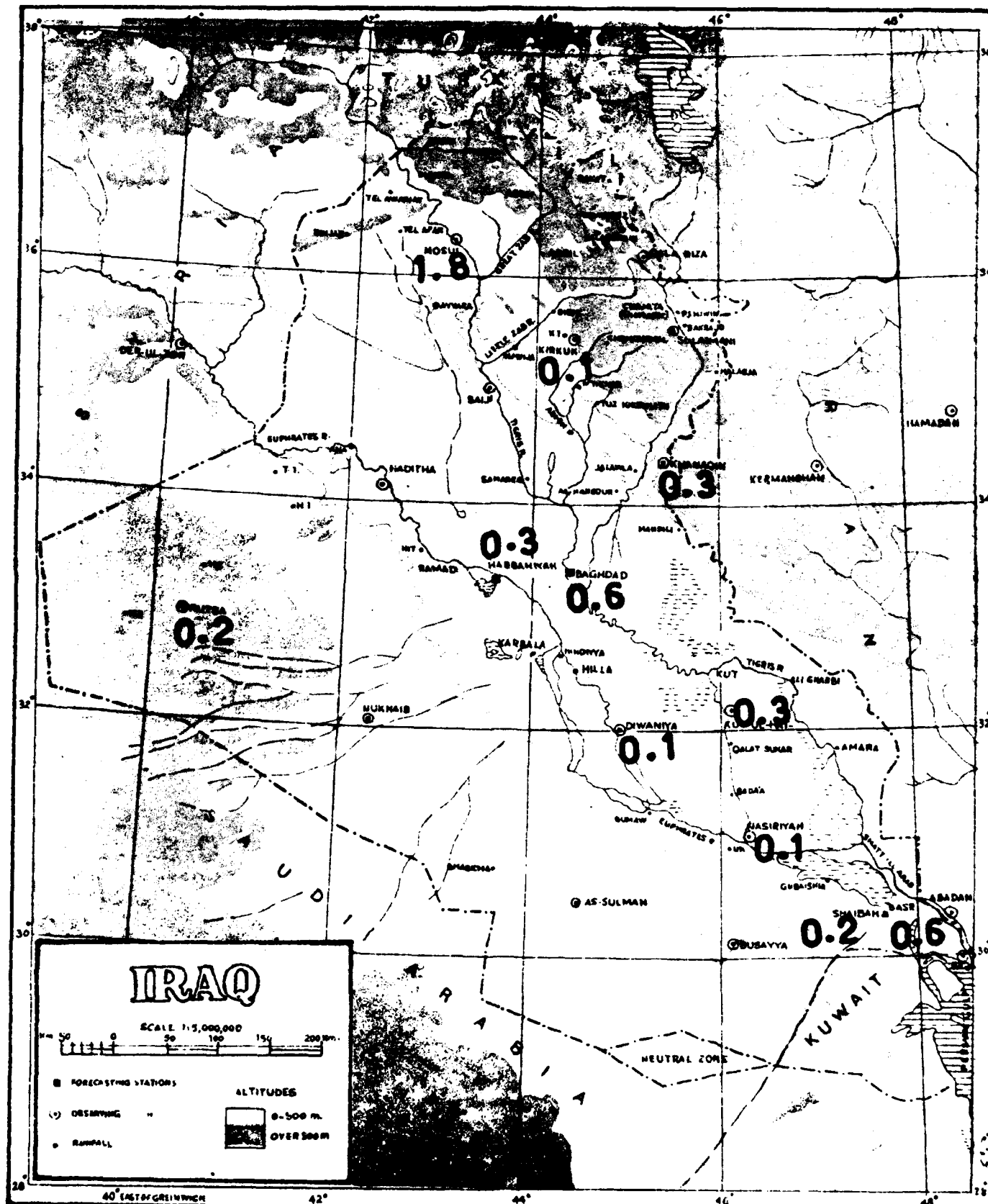
Map labels include: MOSUL, NISINUR, SALU, HADITHA, KARBALA, KUT, AMARA, BASRA, and others. Numerical values along the lines include 3.0, 0.9, 2.9, 0.3, 0.5, and 2.2.

SURVEY PRESS, BARNHART

F O G
Mean Monthly Number of Days with Fog
 period of records see page 2/3

157

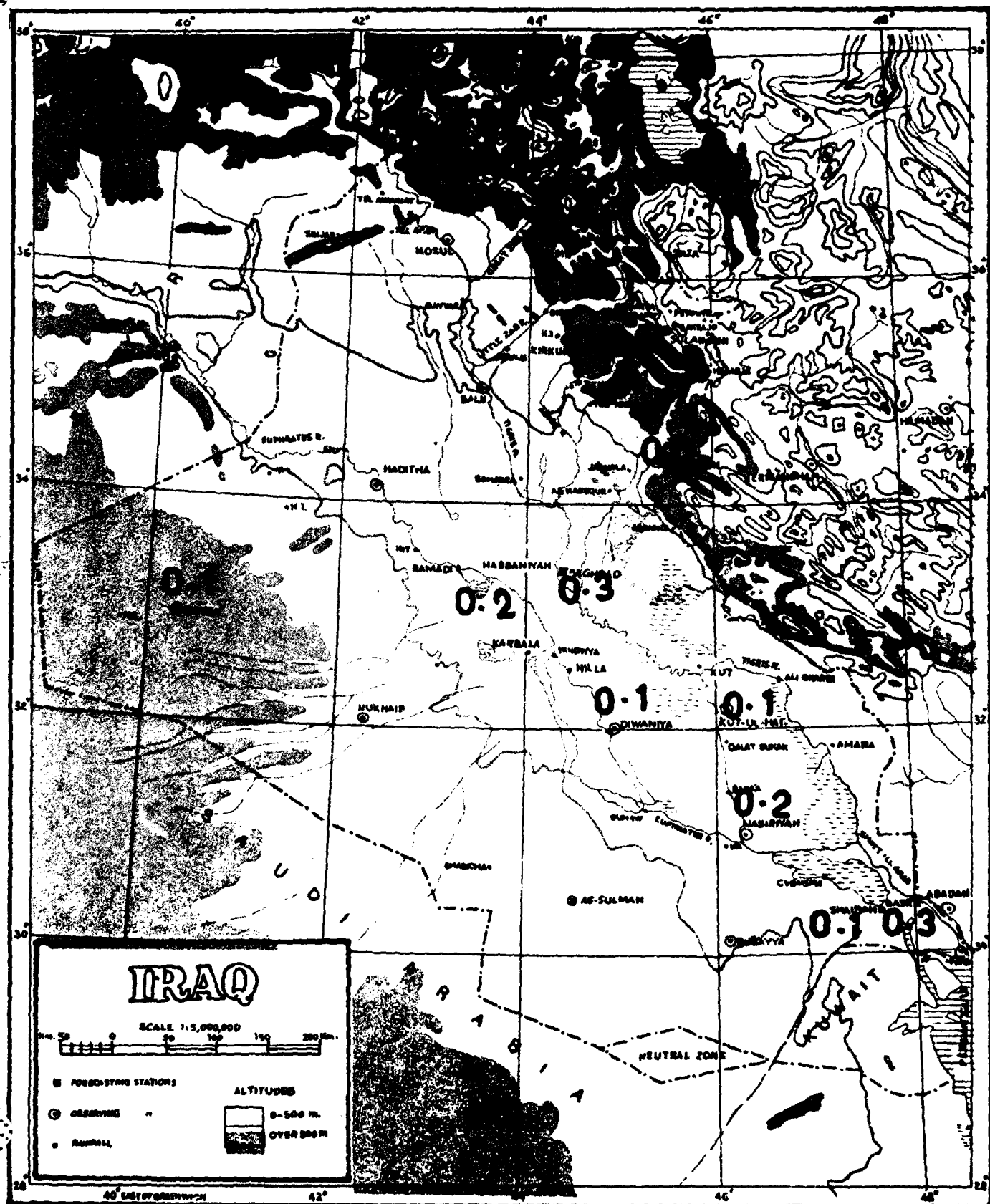
MARCH



F O G
Mean Monthly Number of Days with Fog
 period of records see page 2/3

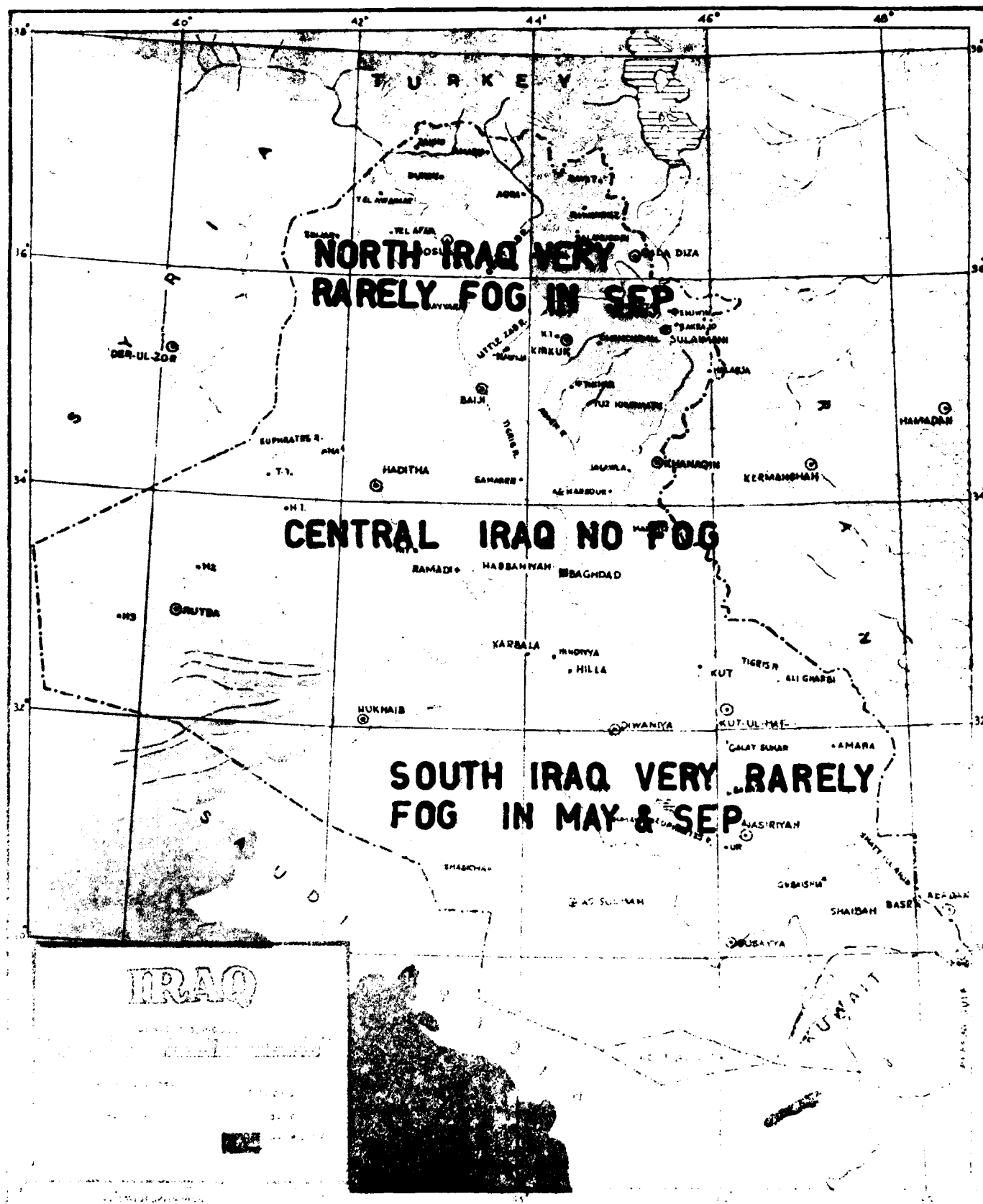
158

APRIL



SURVEY PRESS, BAHRAIN

Mean Monthly Number of Days with Fog
period of records see page 2/3



160

IRAQ

SCALE 1:5,000,000

0 50 100 150 200 km

■ FORECASTING STATIONS

○ OBSERVING STATIONS

● RAINFALL

ALTITUDES

0-500 ft

OVER 500 ft

NEUTRAL ZONE

IRAQ

30° 32° 34° 36°

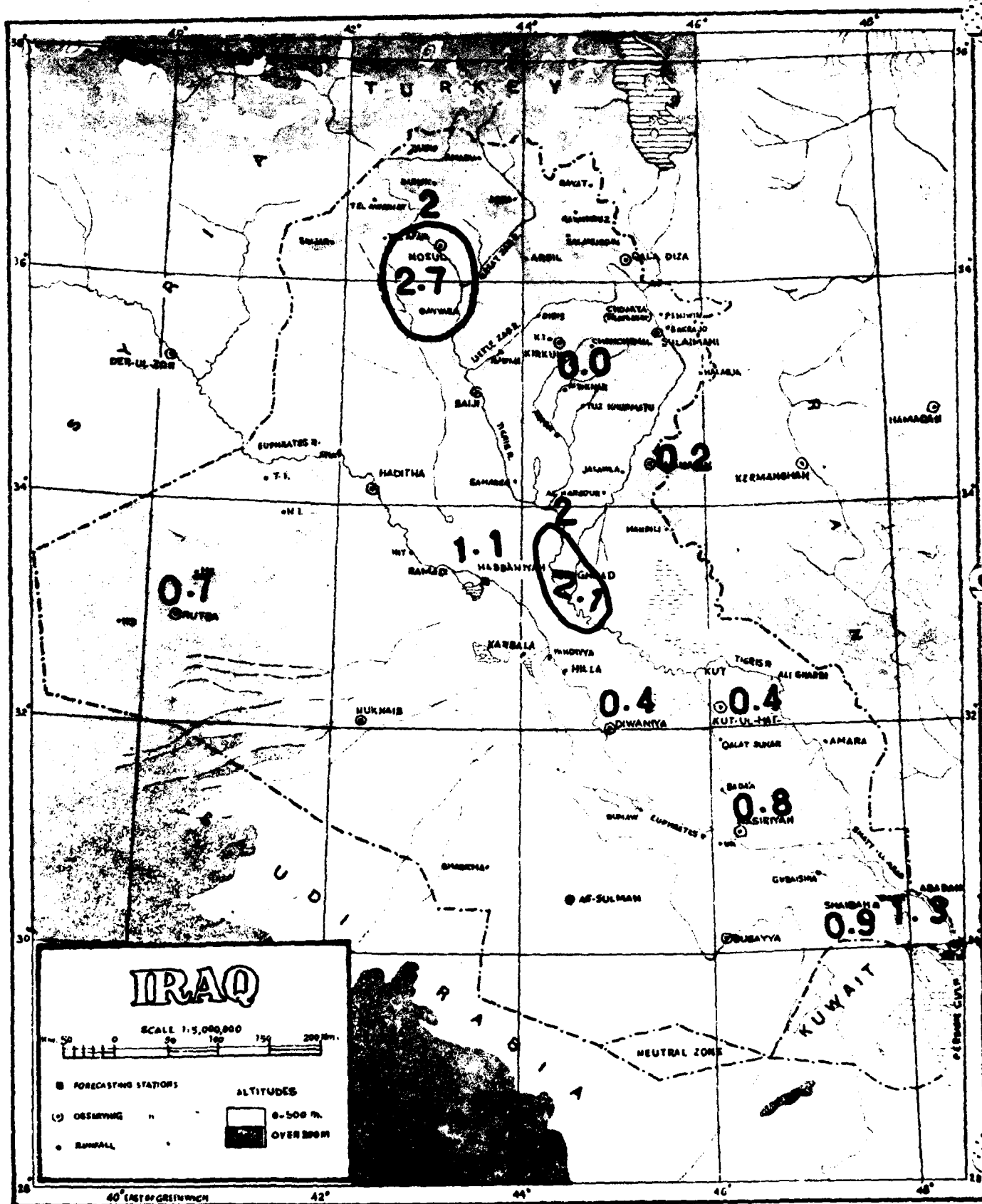
40° 42° 44° 46°

40° EAST OF GREENWICH

F O G
Mean Monthly Number of Days with Fog
 period of records see page 2/3

161

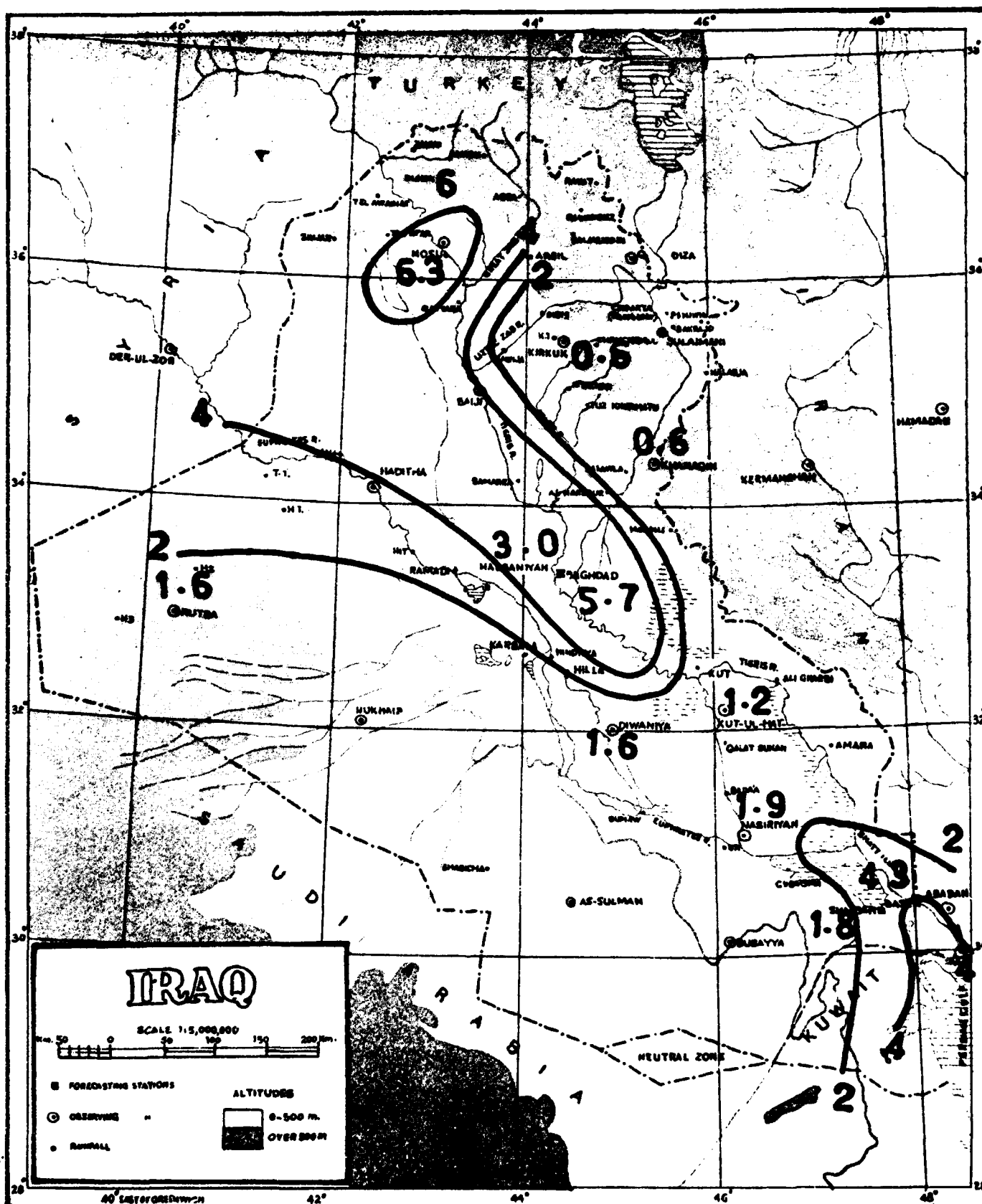
NOVEMBER

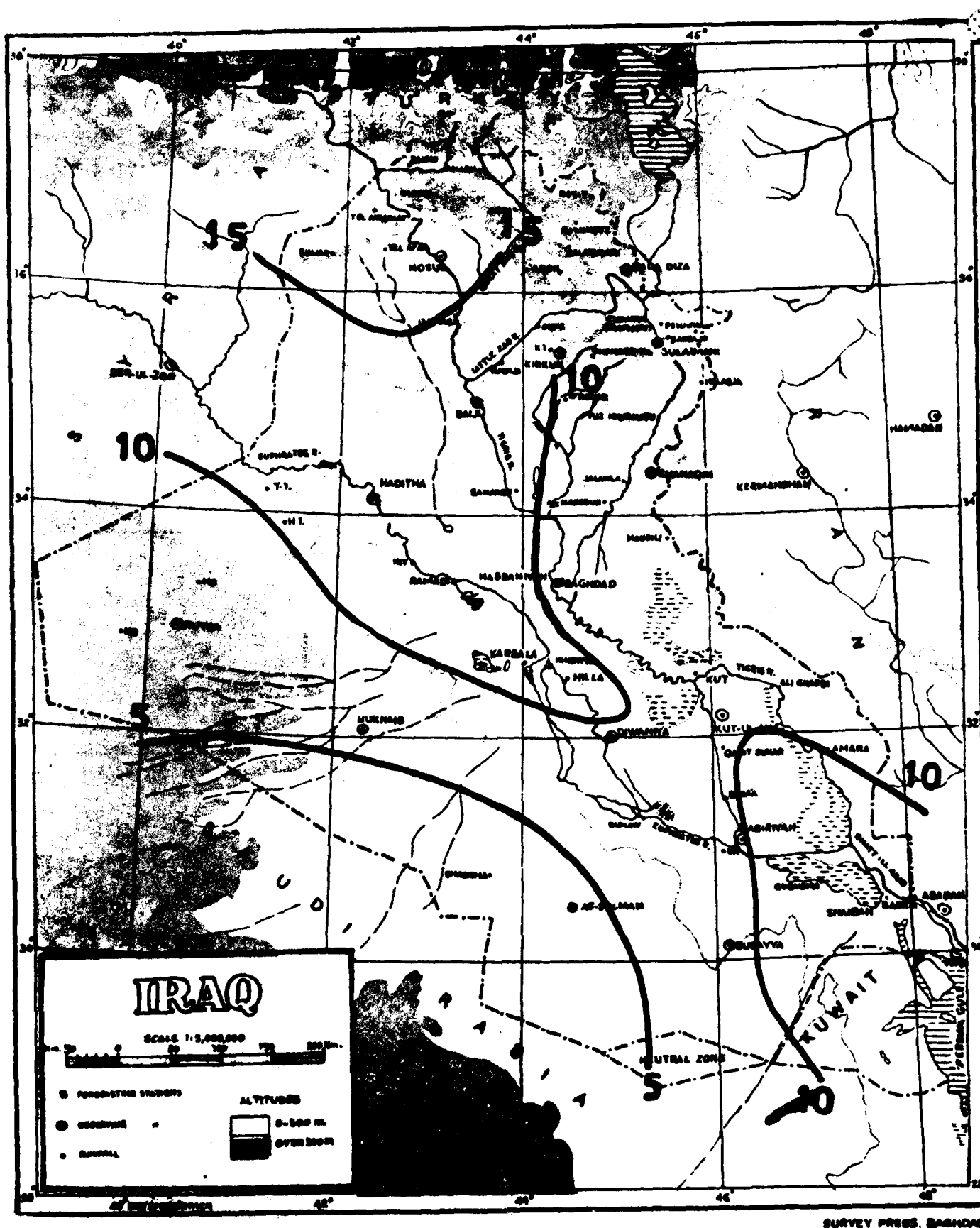


F O G Mean Monthly Number of Days with Fog period of records see page 2/3

162

DECEMBER





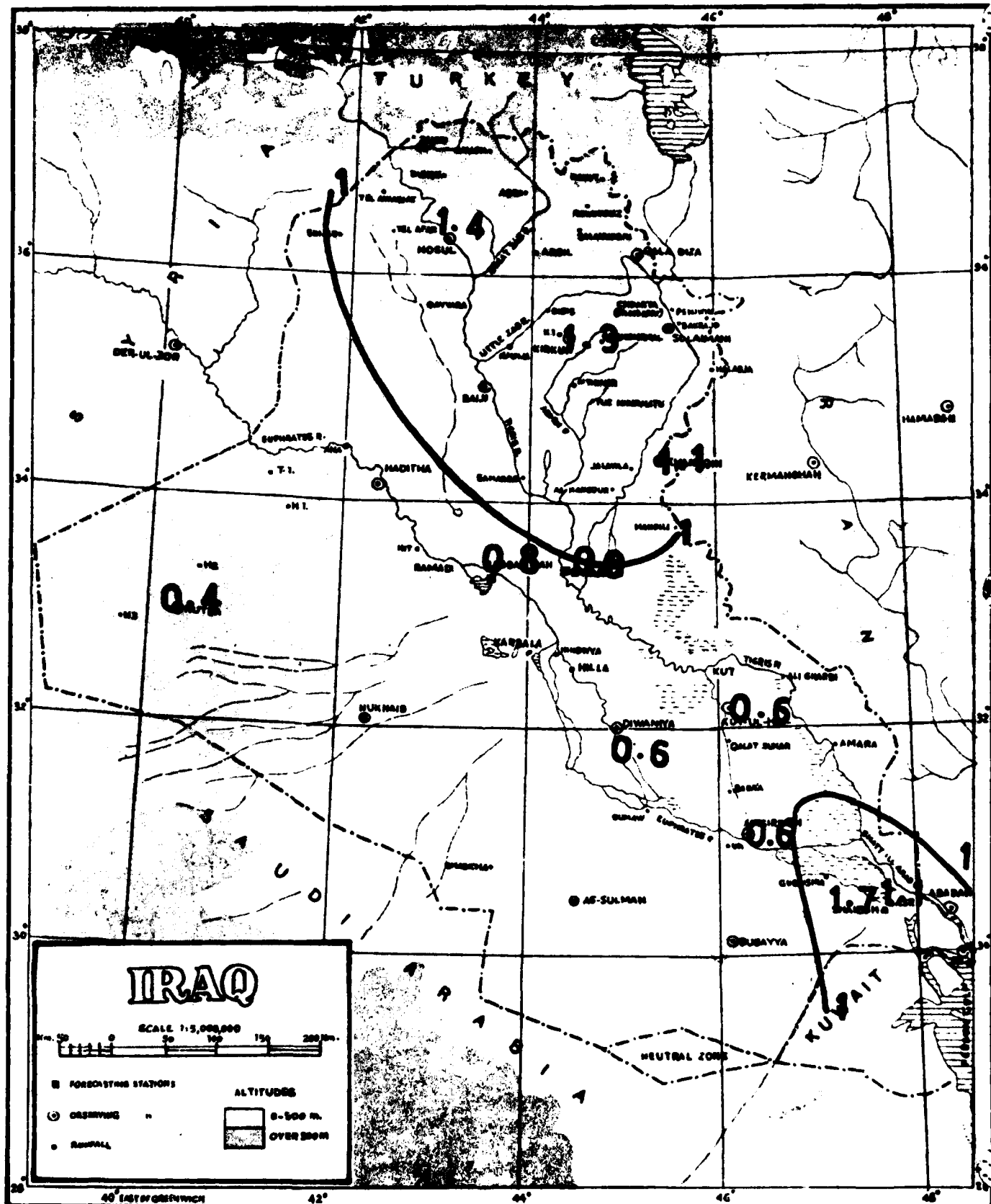
164

THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

165

FEBRUARY

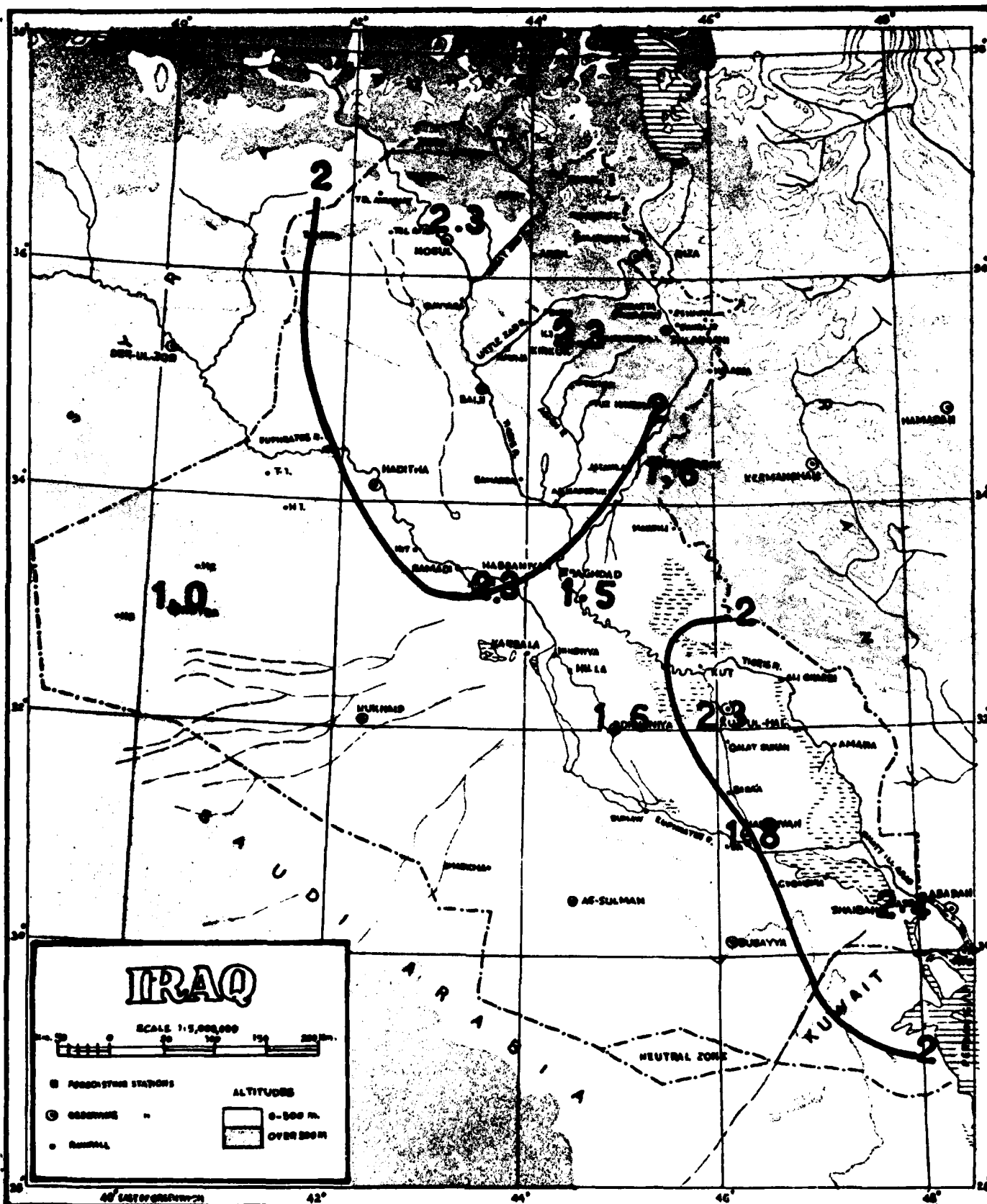


THUNDERSTORM

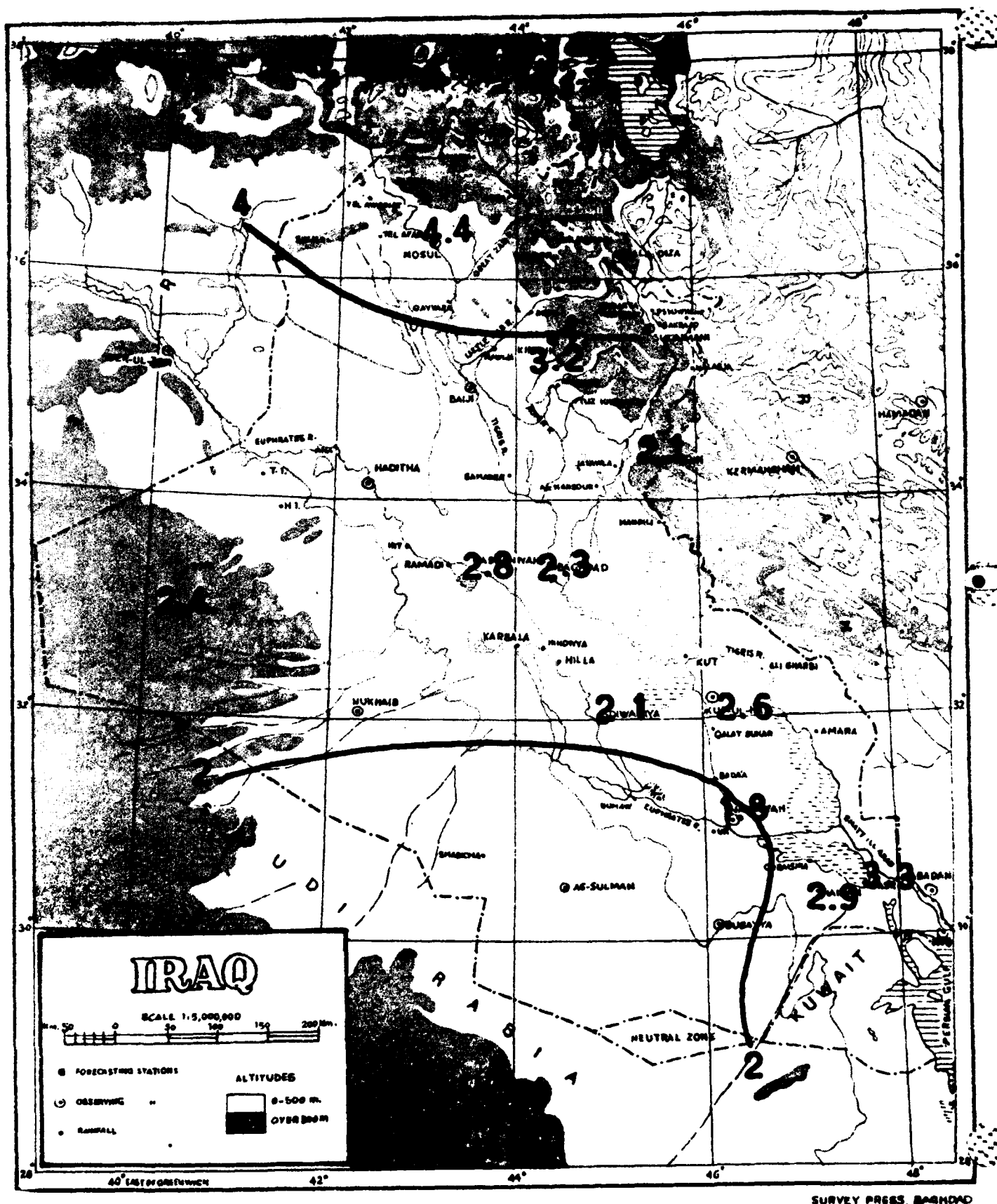
Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

166

MARCH



APRIL

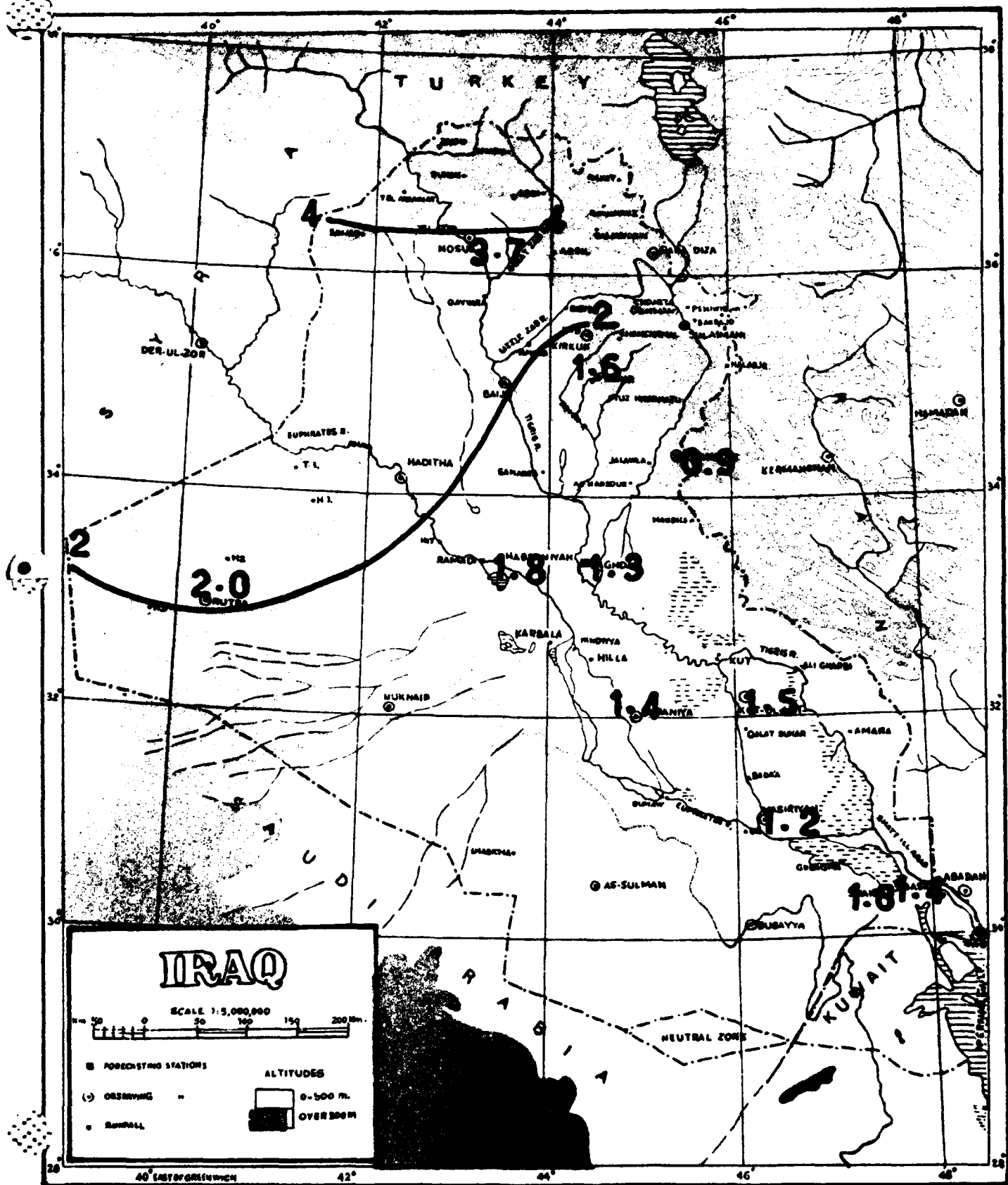


THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

168

MAY

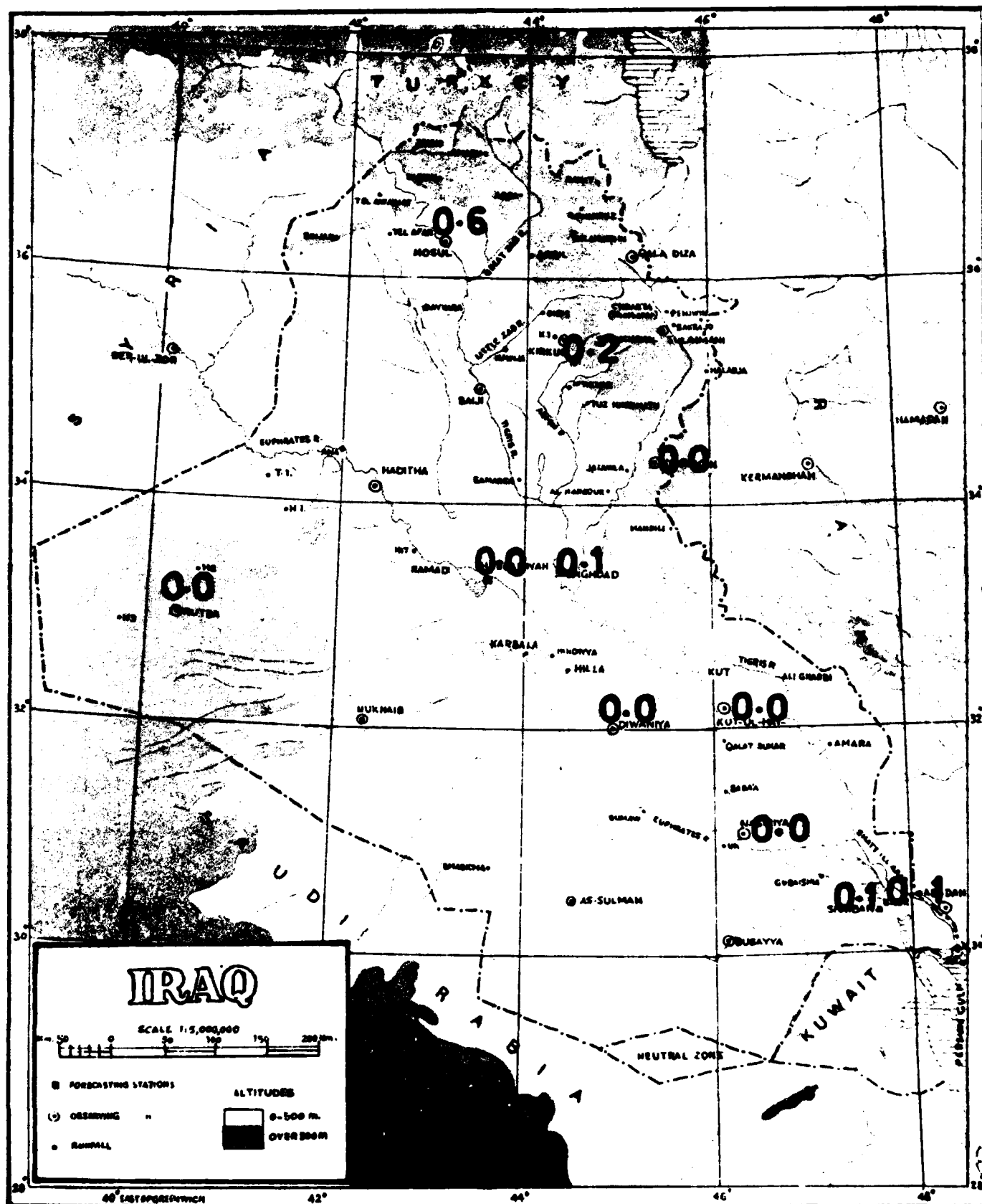


THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

169

JUNE

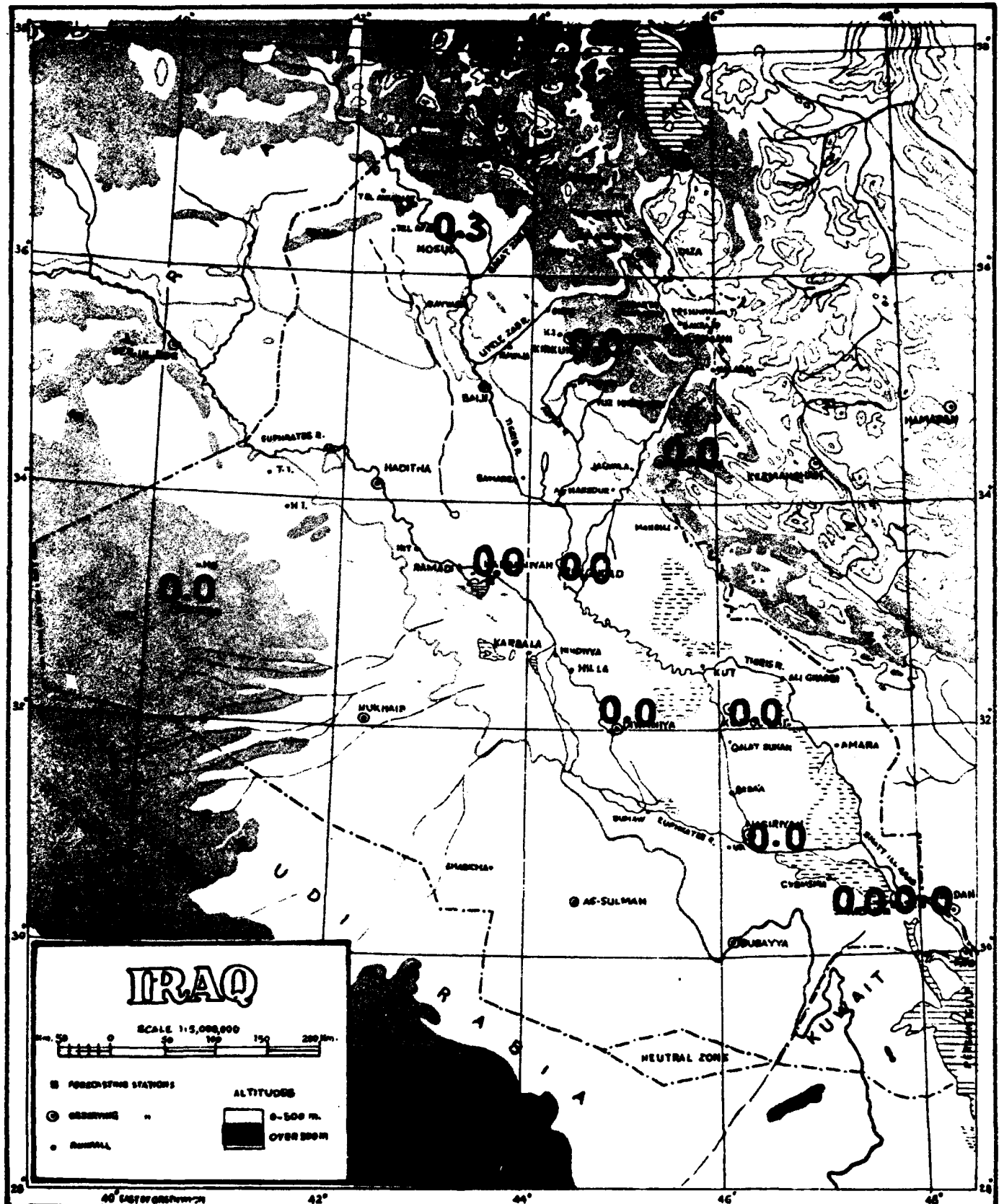


THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

170

JULY



171

[illegible]

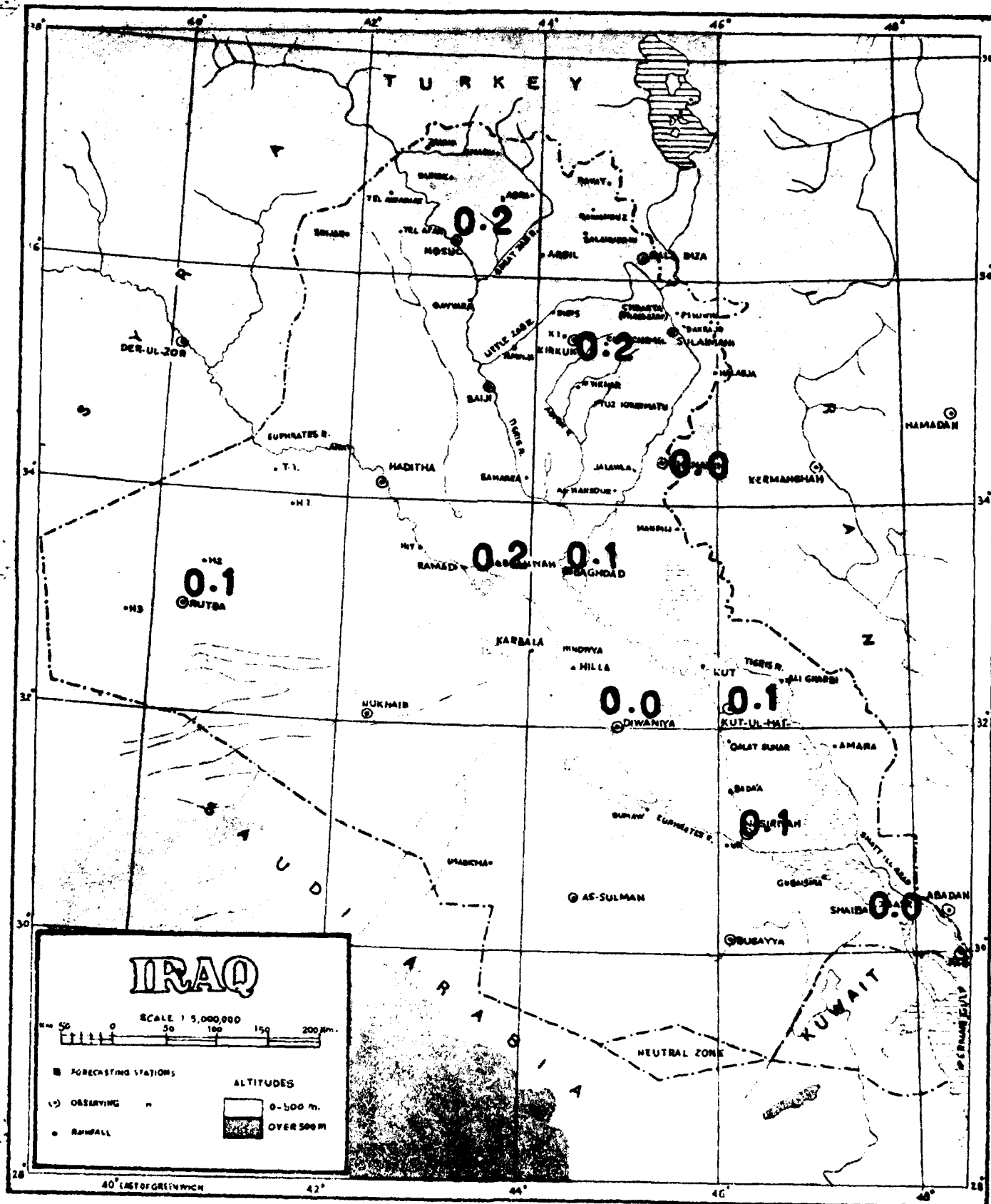
SURVEY PRESS BAHMANO

THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

172

SEPTEMBER

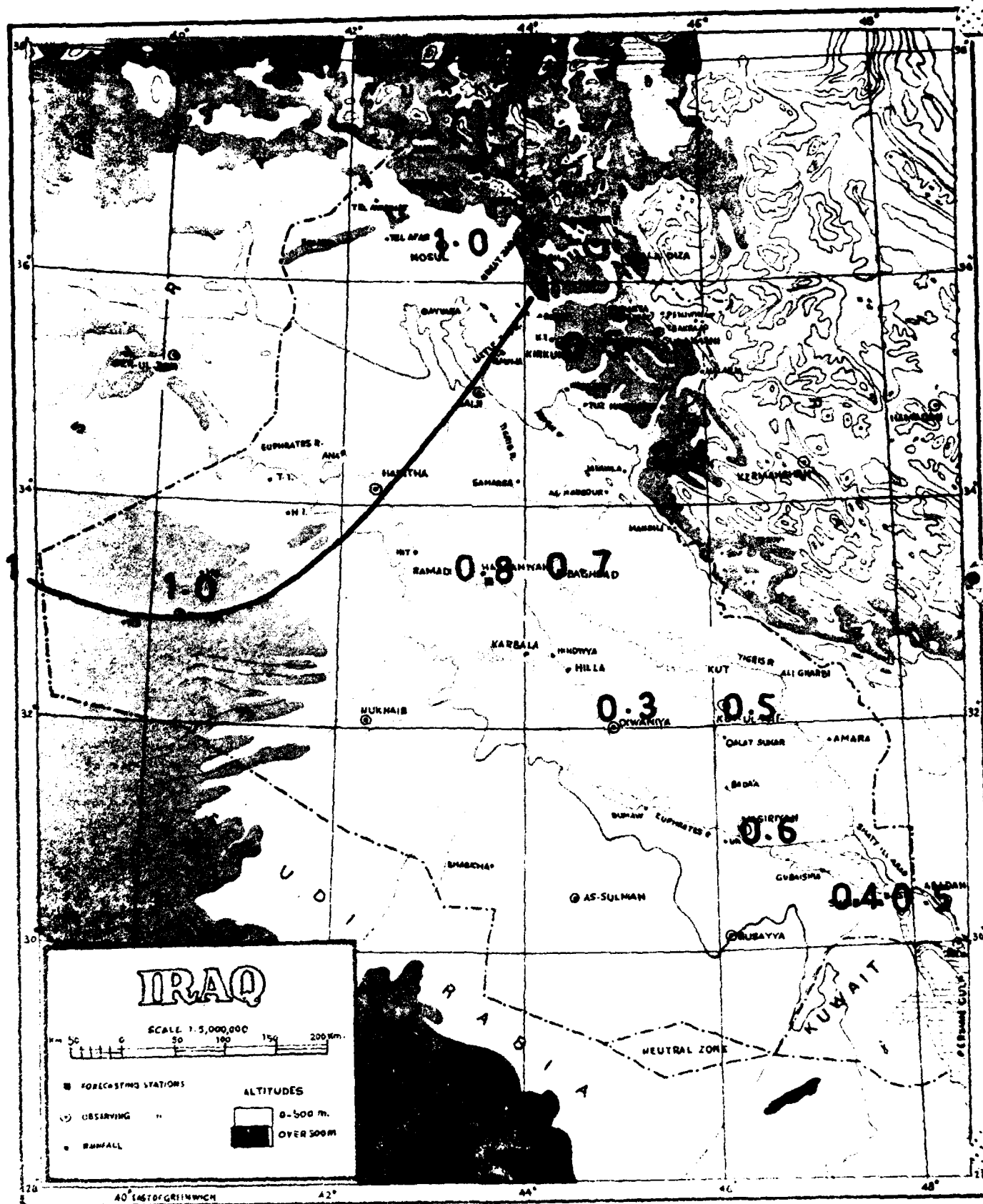


THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

173

OCTOBER



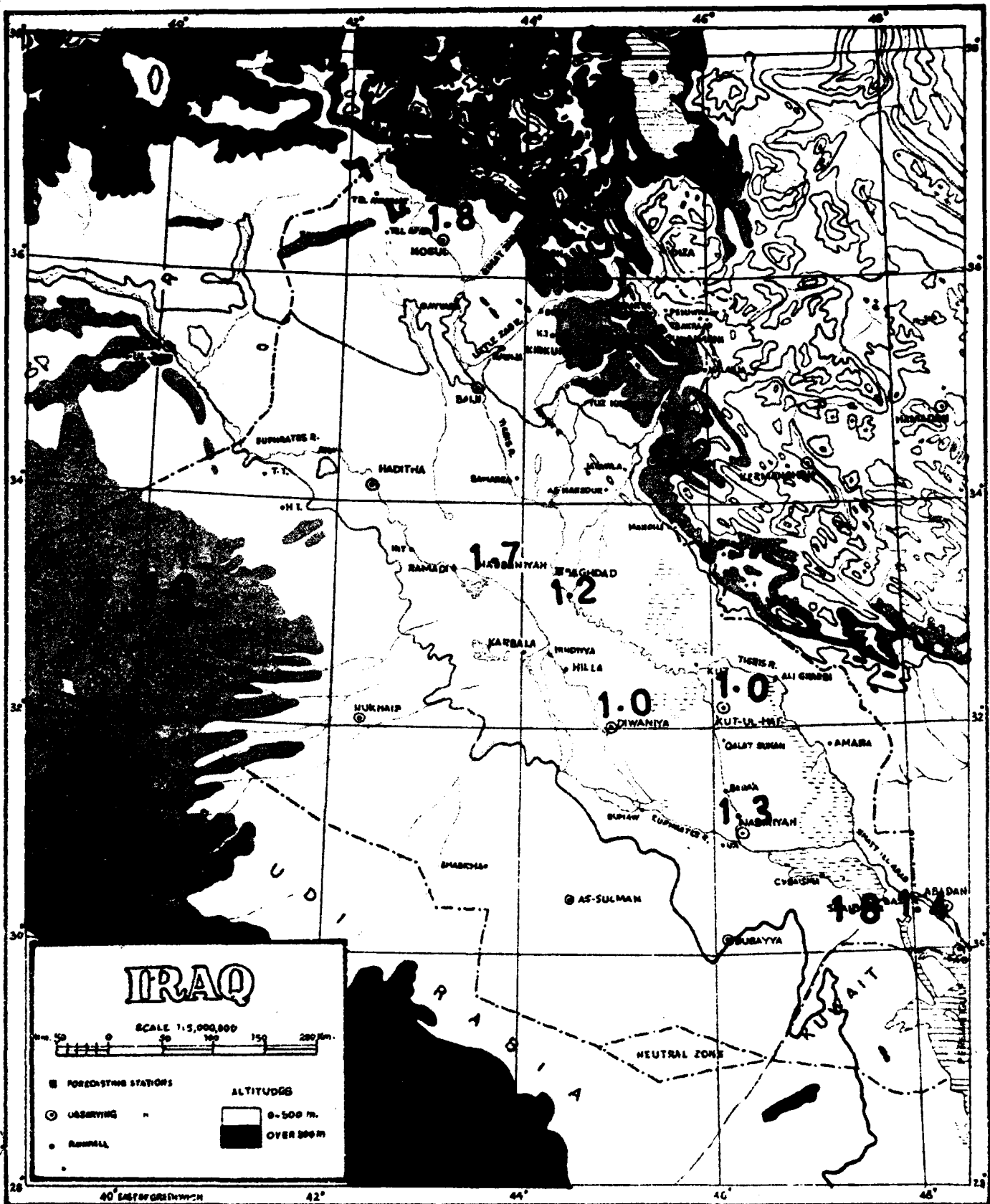
SURVEY PRESS BAHAD

THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

174

NOVEMBER

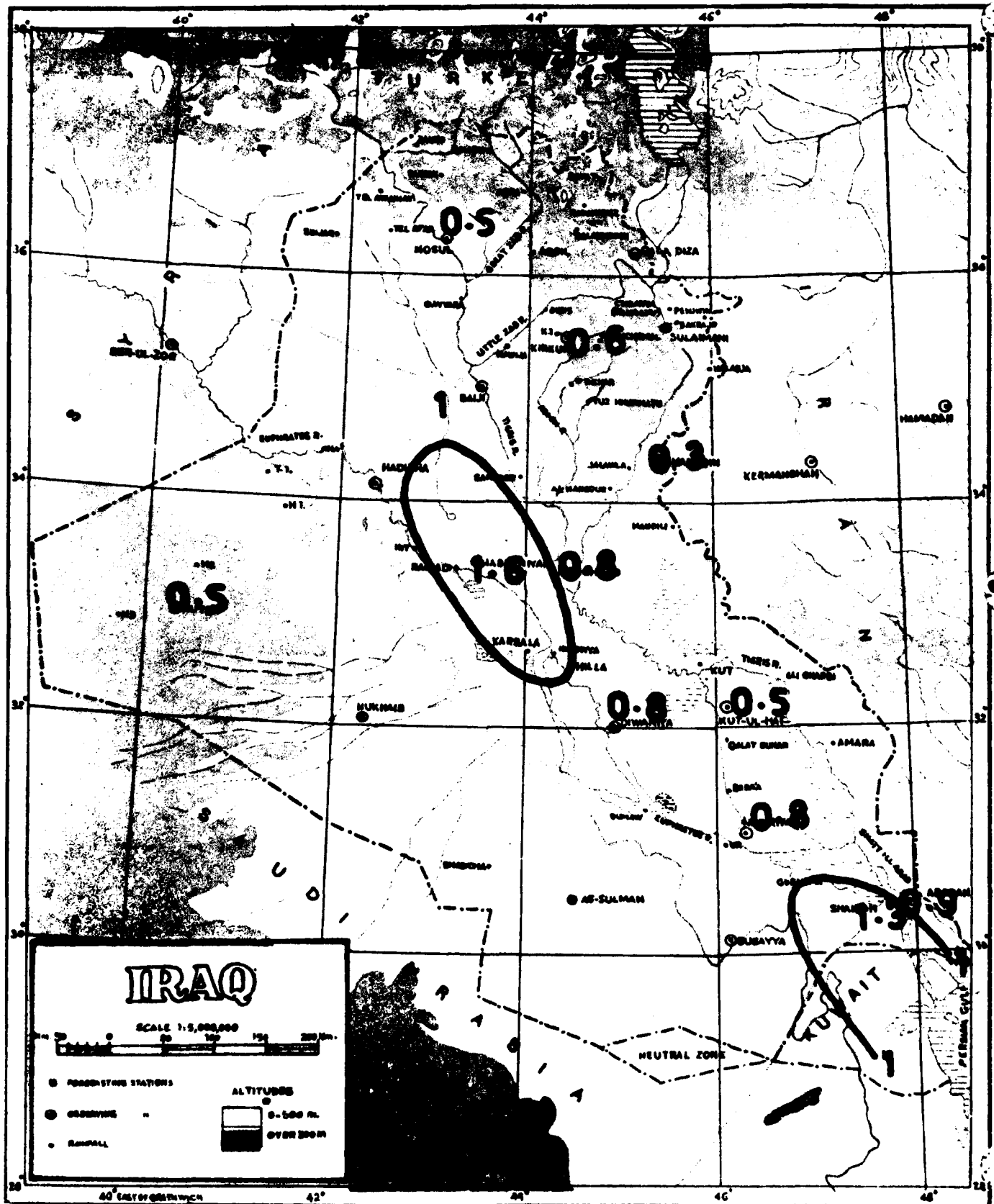


THUNDERSTORM

Mean Monthly Number of Days with Thunderstorm
period of records see page 2/3

175

DECEMBER



176

JANUARY 0300 GMT.

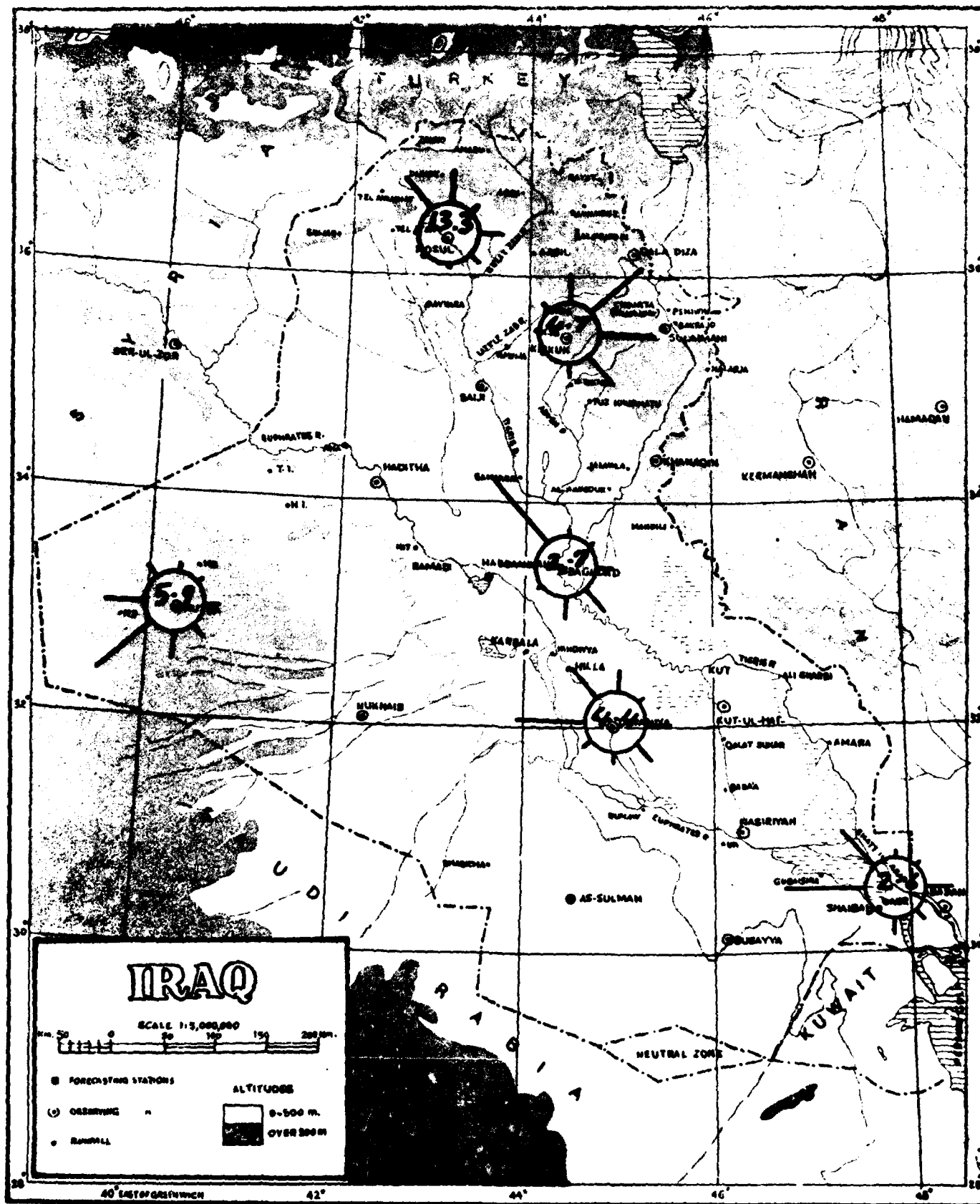


The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

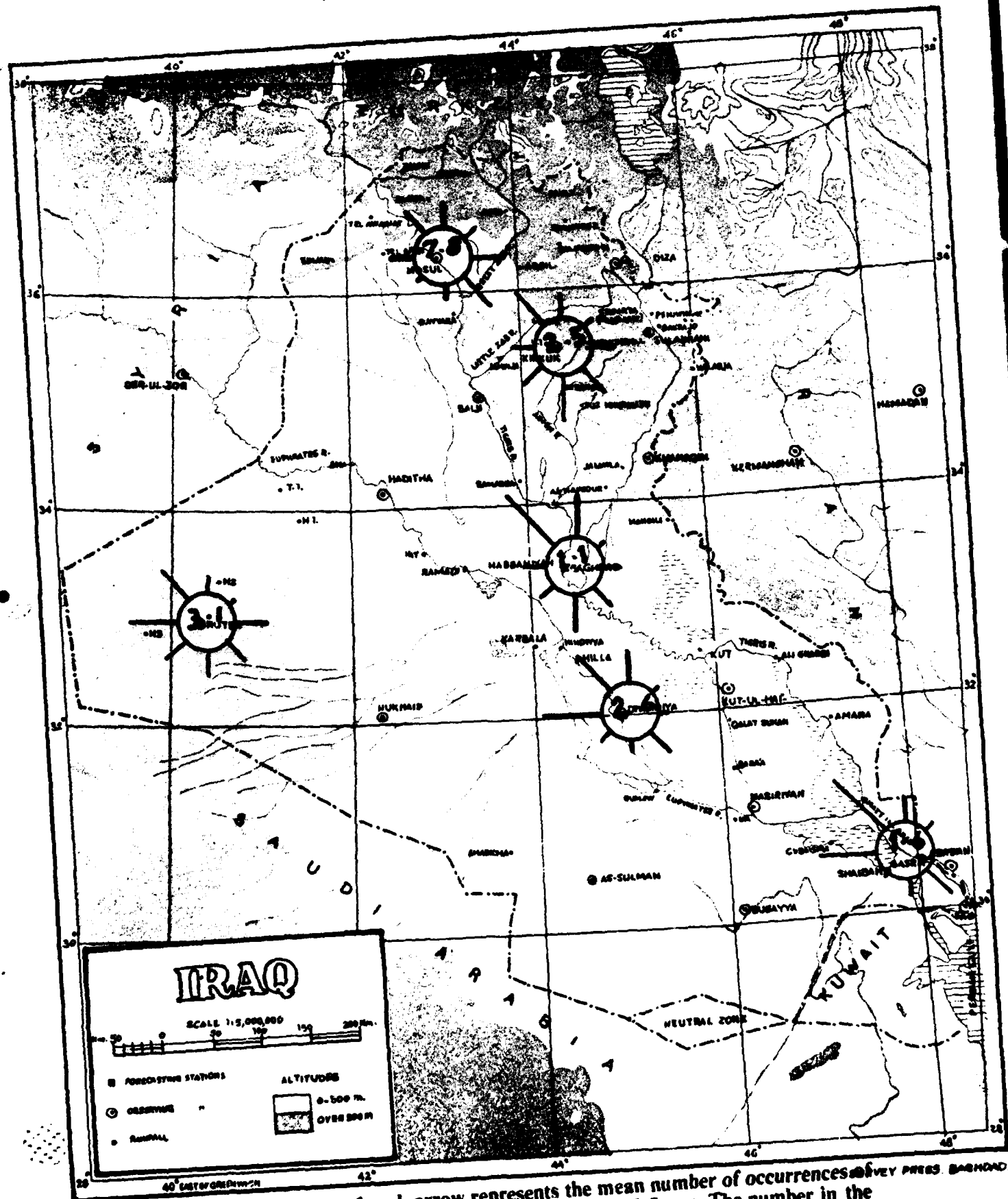
177

January 0600 GMT.



The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

JANUARY 1200 GMT.

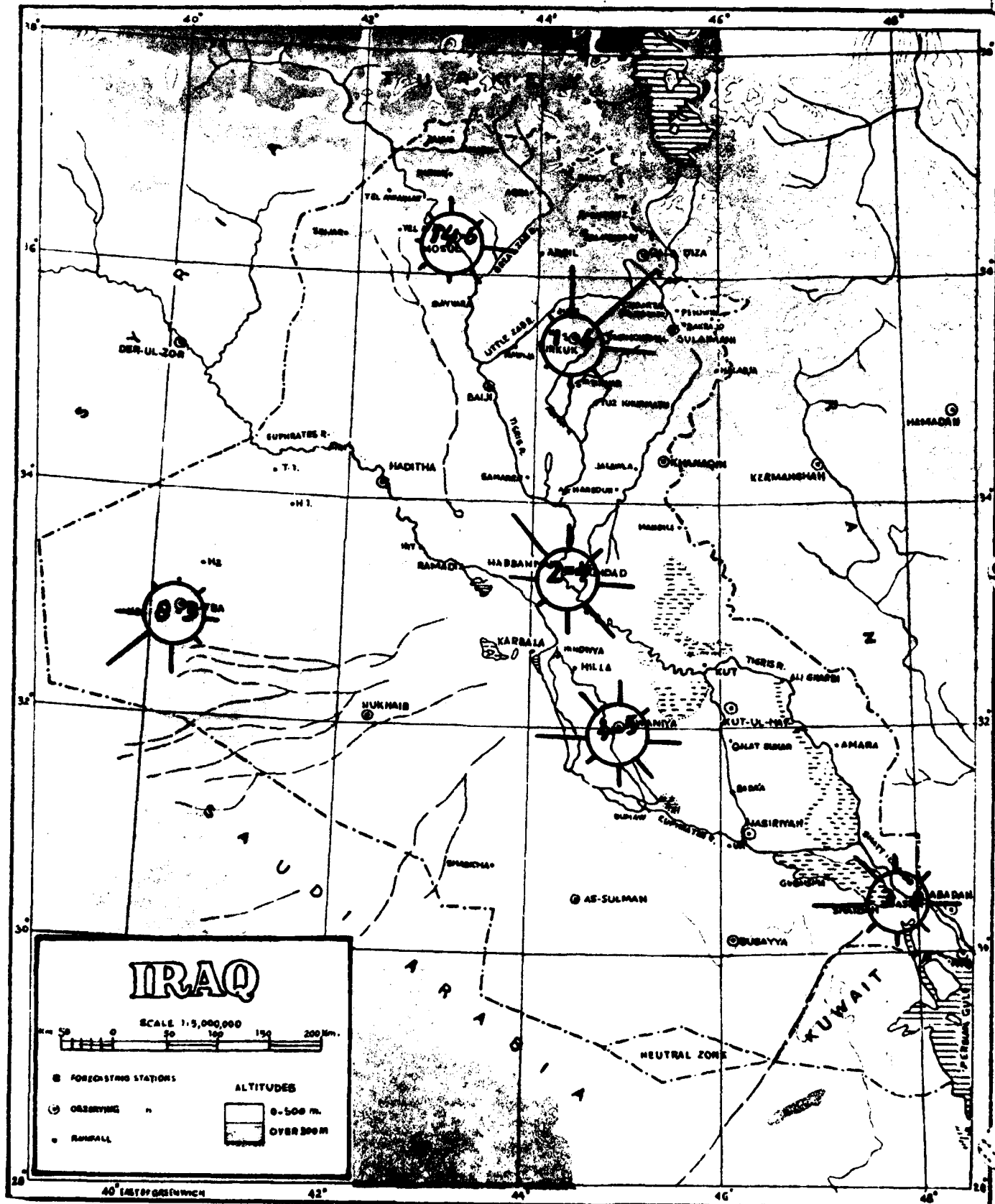


The length of each arrow represents the mean number of occurrences of heavy fumes, BARMOND, that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

179

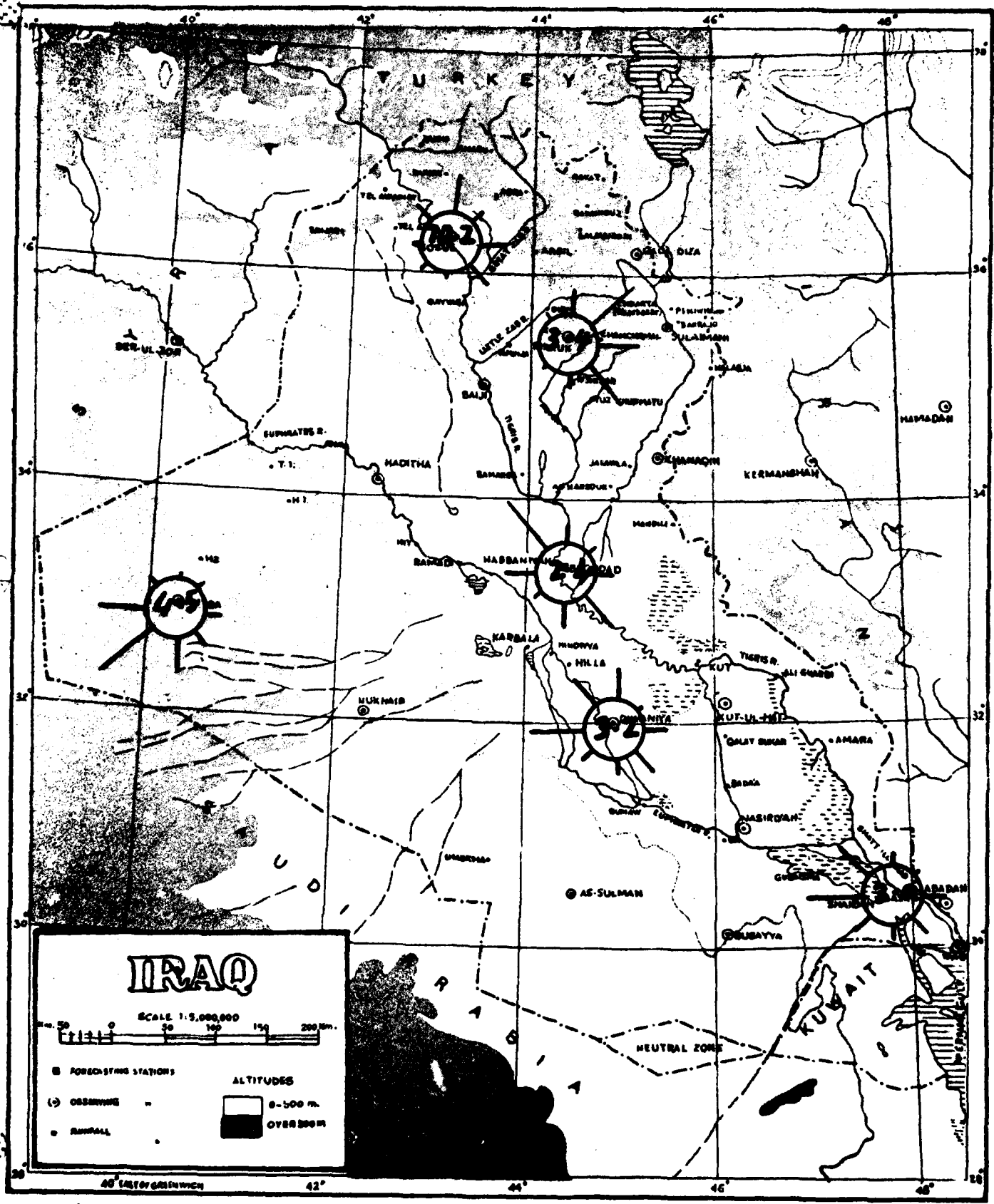
February 0300 GMT.



Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

180

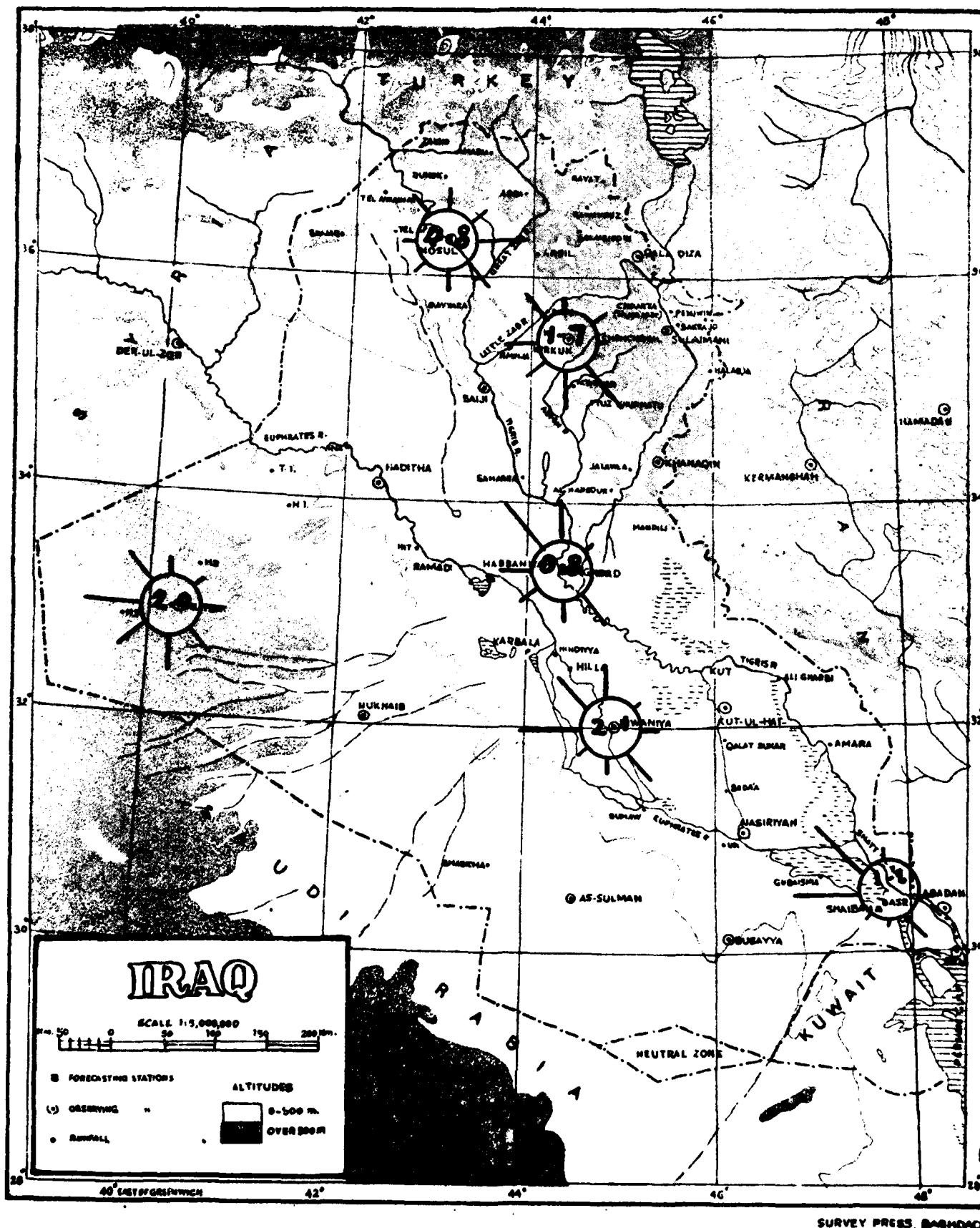
FEBRUARY 0600 GMT.



The length of each arrow represents the mean Number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows without wind.

Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

FEBRUARY 1200 GMT.

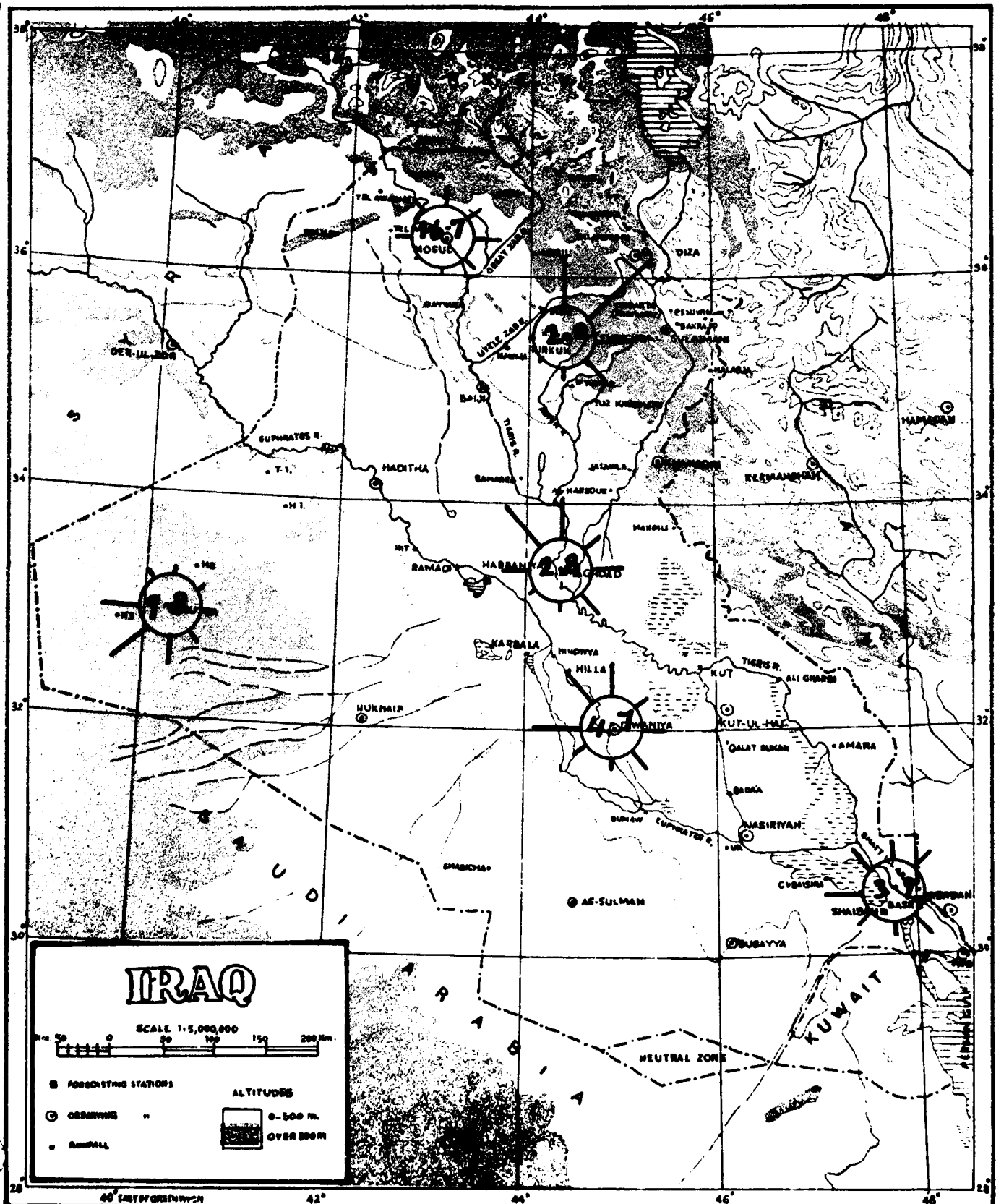


The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

182

MARCH 0300 GMT

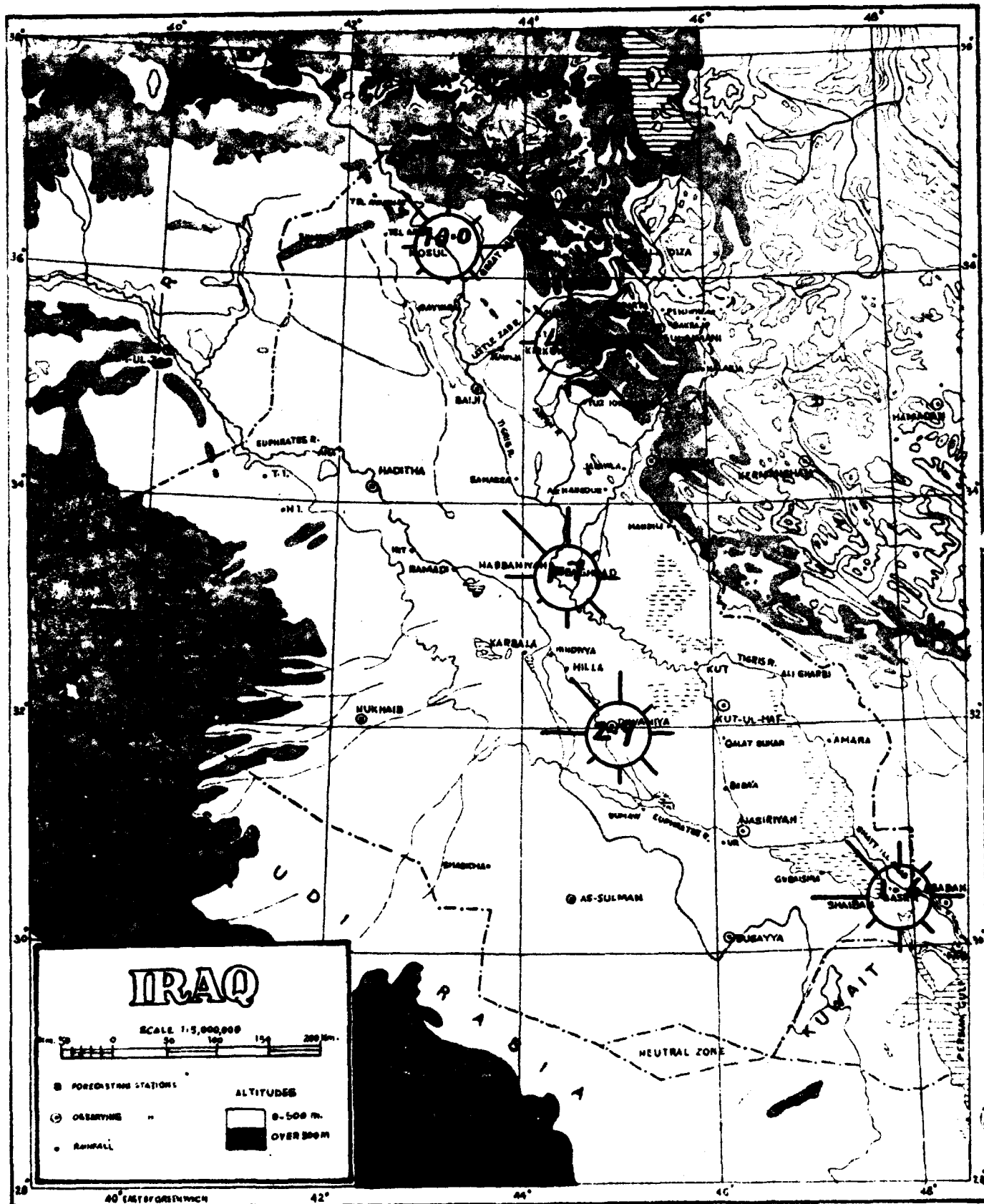


The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

183

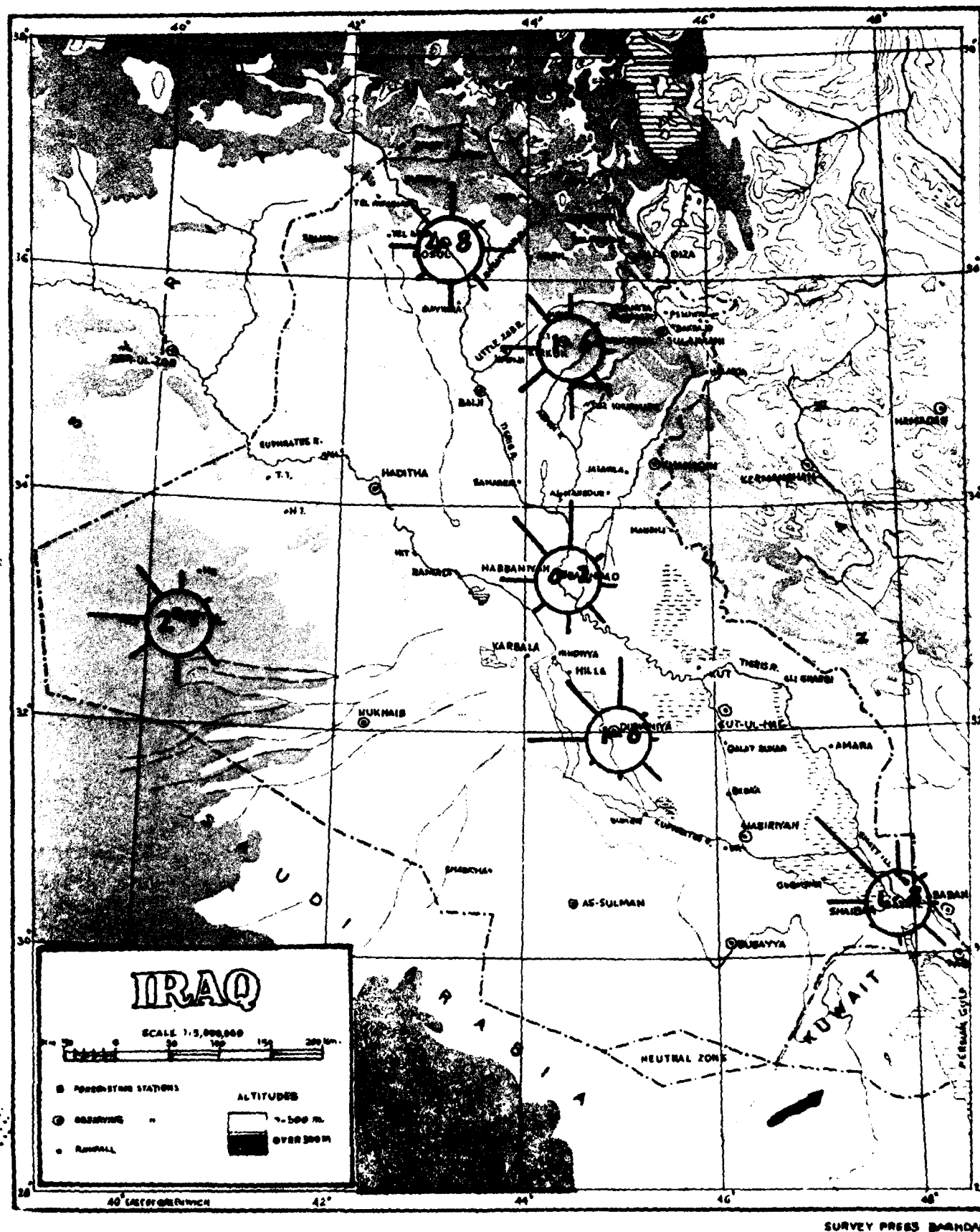
MARCH 0600 GMT.



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

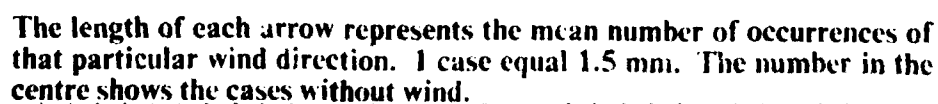
184

MARCH 1200 GMT.



185

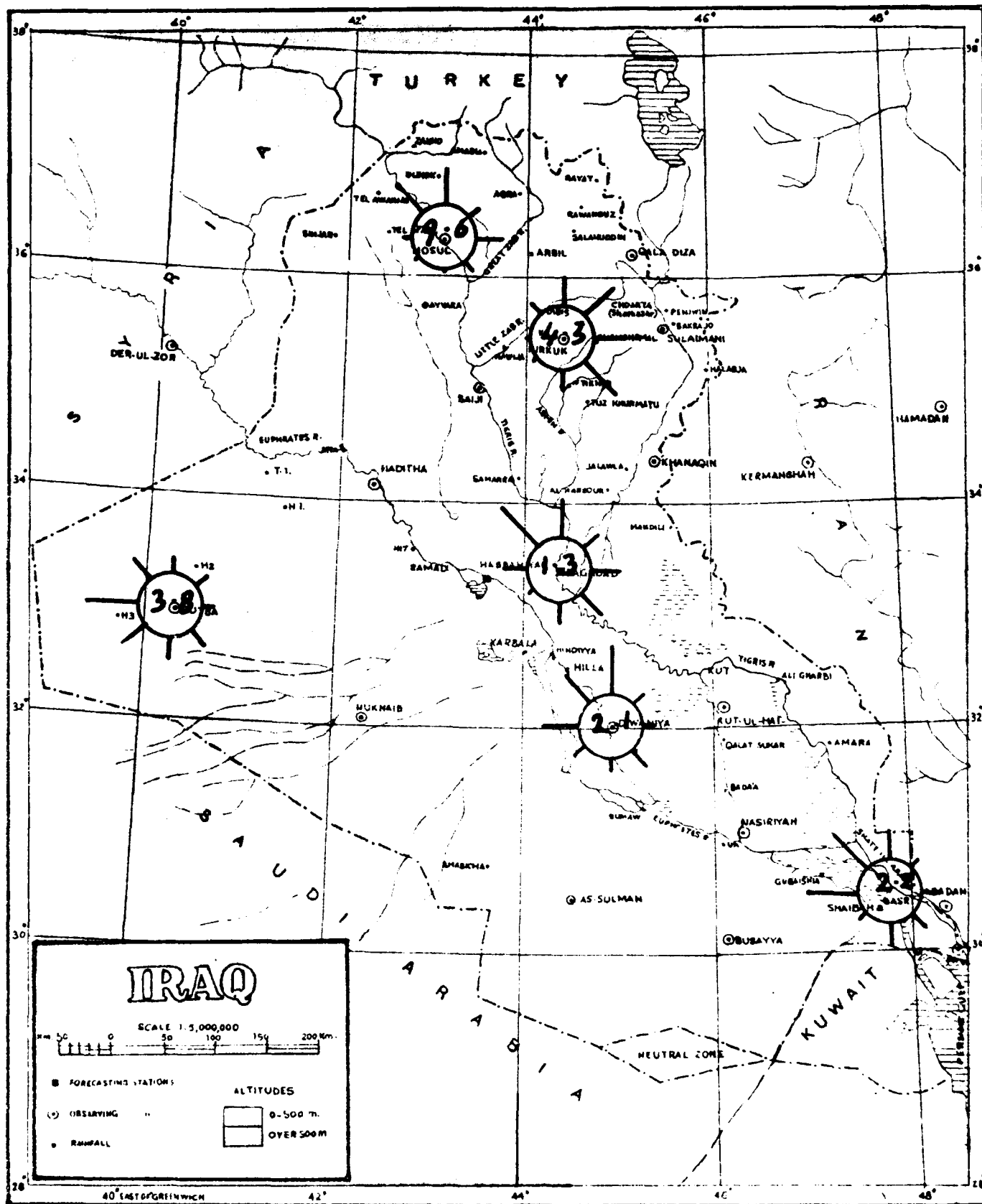
APRIL 0300 GMT.



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

186

APRIL 0600 GMT



AD-A159 703

CLIMATOLOGICAL ATLAS FOR IRAQ(U) AIR FORCE
ENVIRONMENTAL TECHNICAL APPLICATIONS CENTER SCOTT AFB
IL APR 85 USAFETAC/DS-85/011

3/3

UNCLASSIFIED

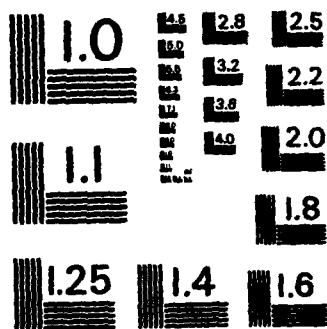
F/G 4/2

NL

END

FILMED

DTIC

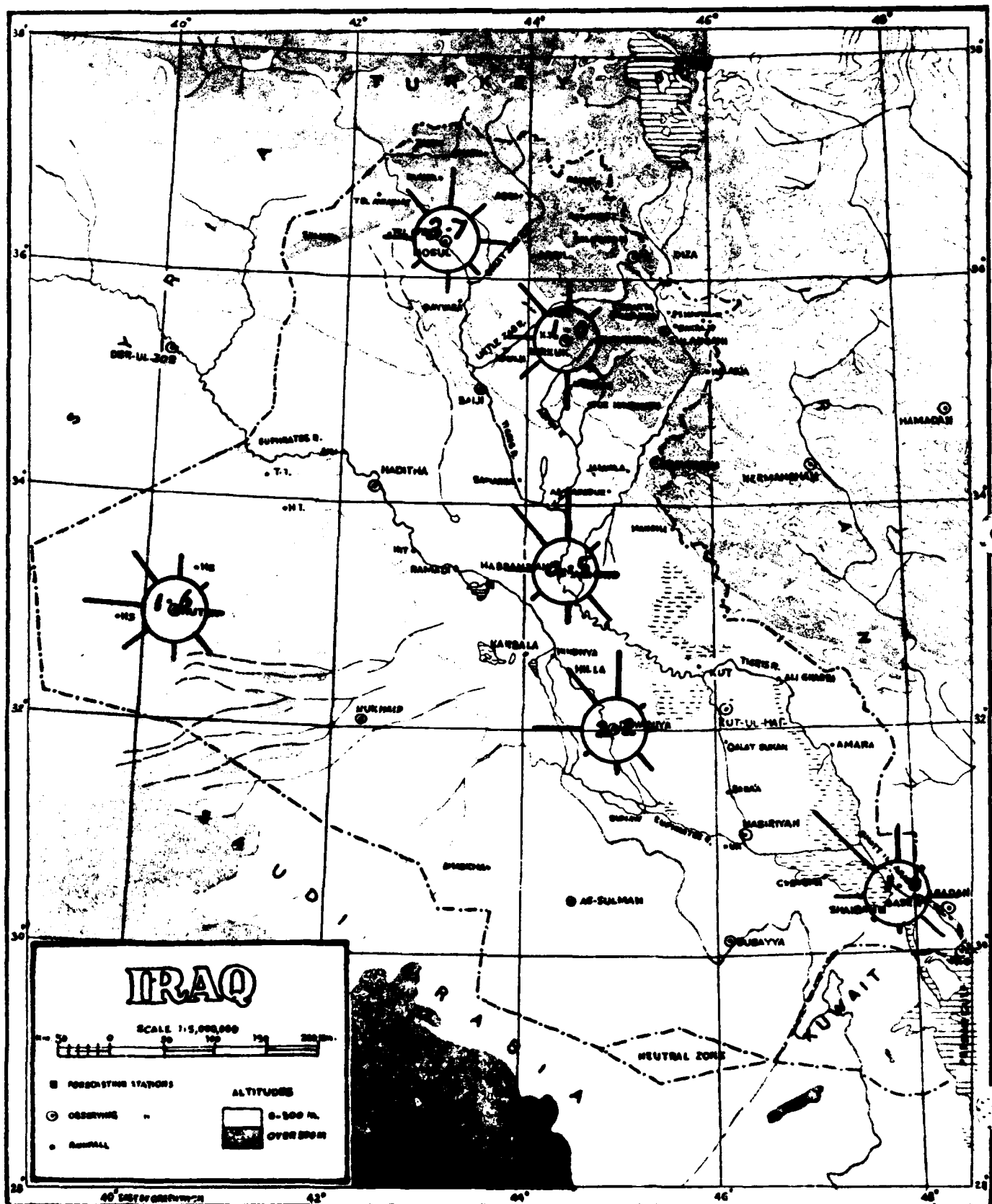


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

W I N D
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

187

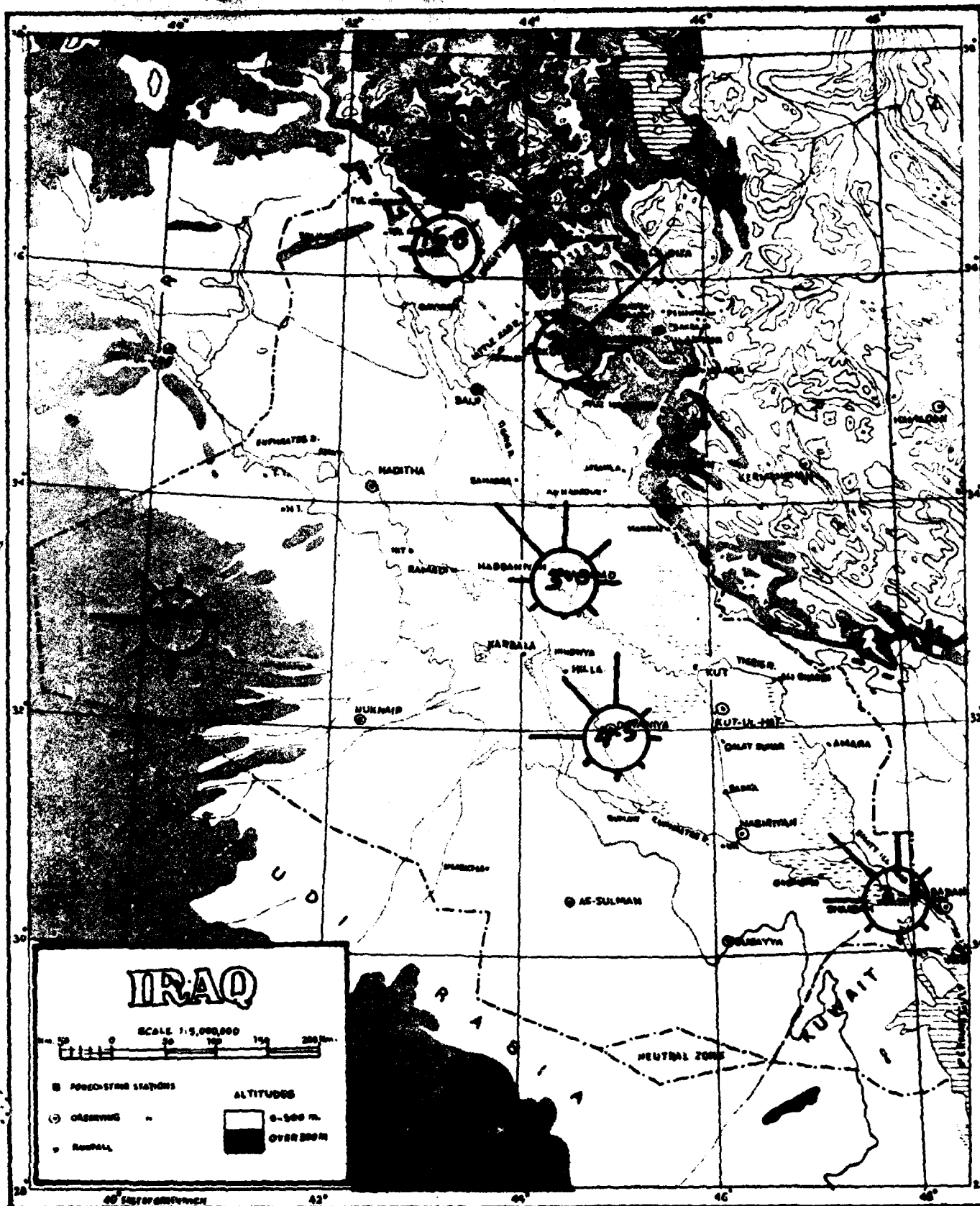
APRIL 1200 GMT



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

188

MAY 0300 GMT.



SURVEY PRESS, BAHNAD

100

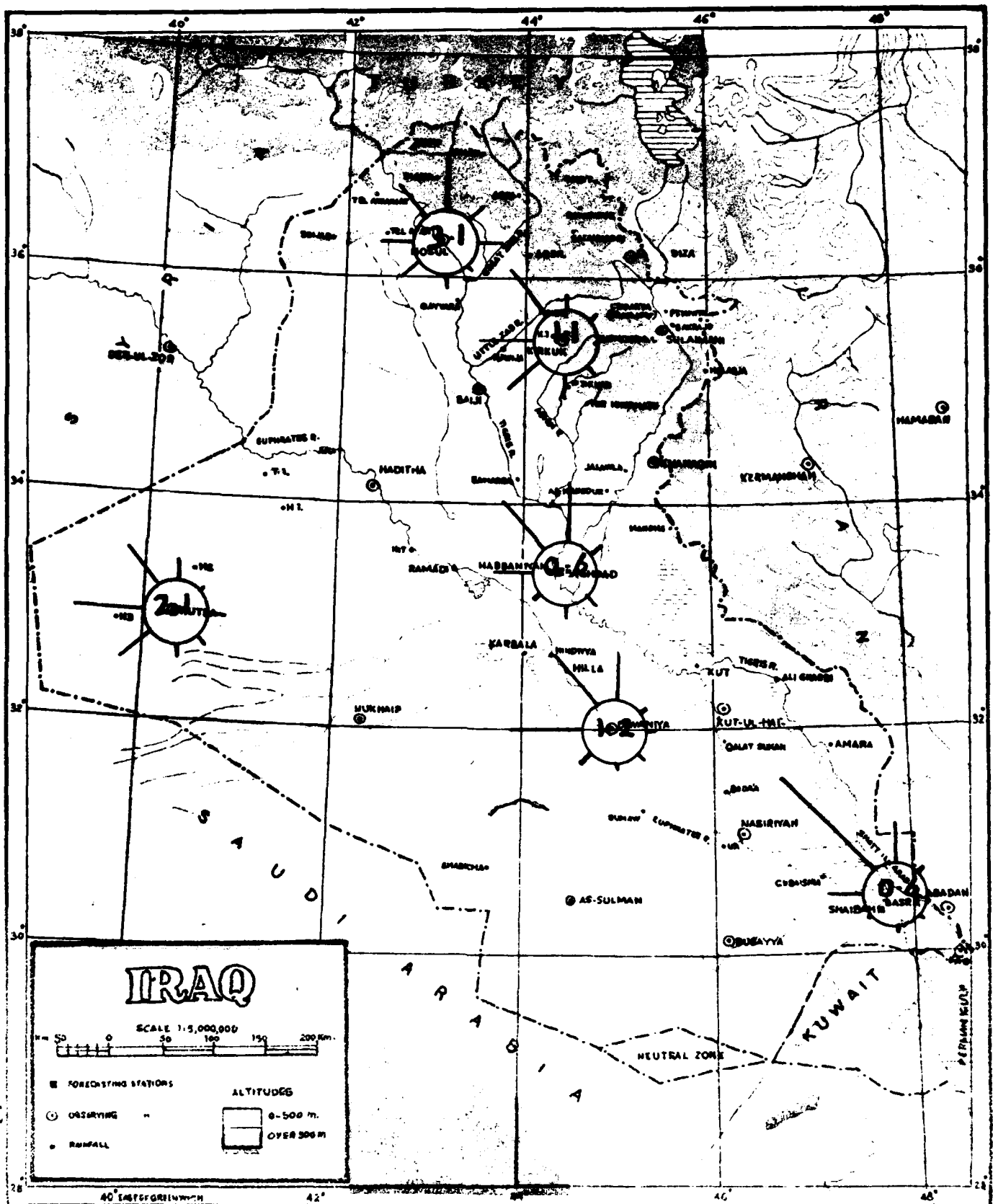


SURVEY PRICES, RAILROAD

WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

190

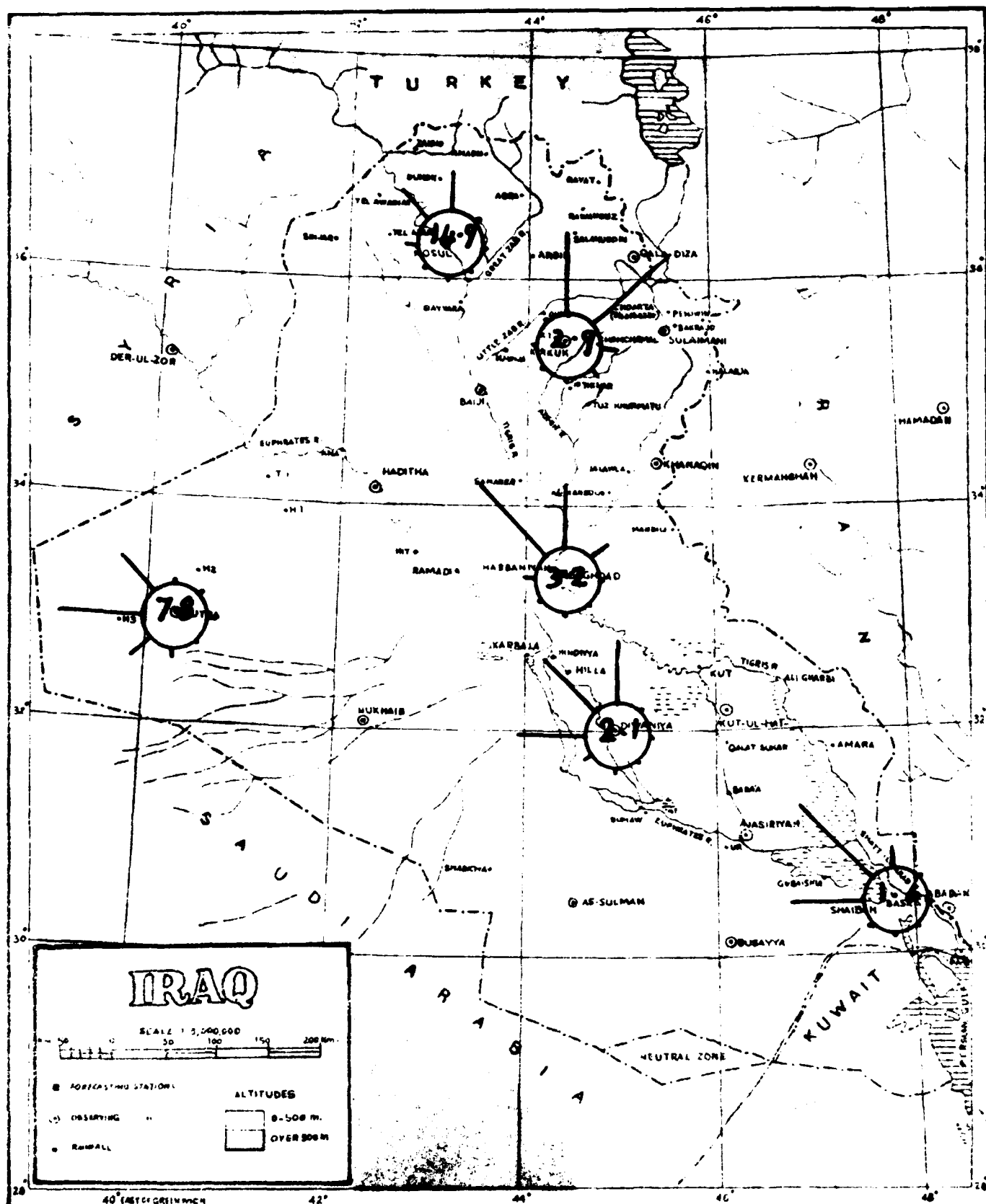
MAY 1200 GMT.



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

191

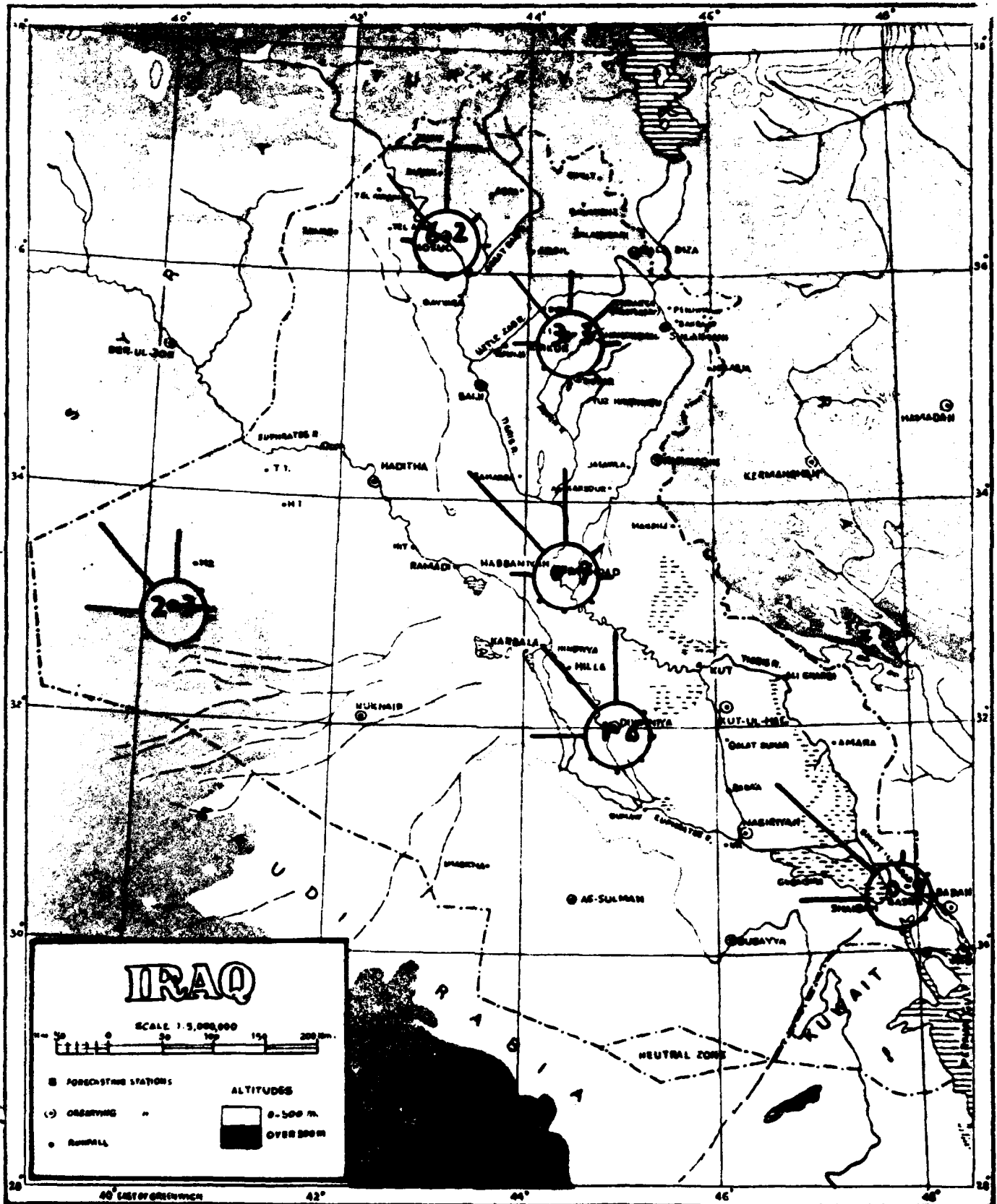
JUNE 0300 GMT



W I N D
Average Frequency from Specified Directions
for some selected stations
period of records see page 2 3

192

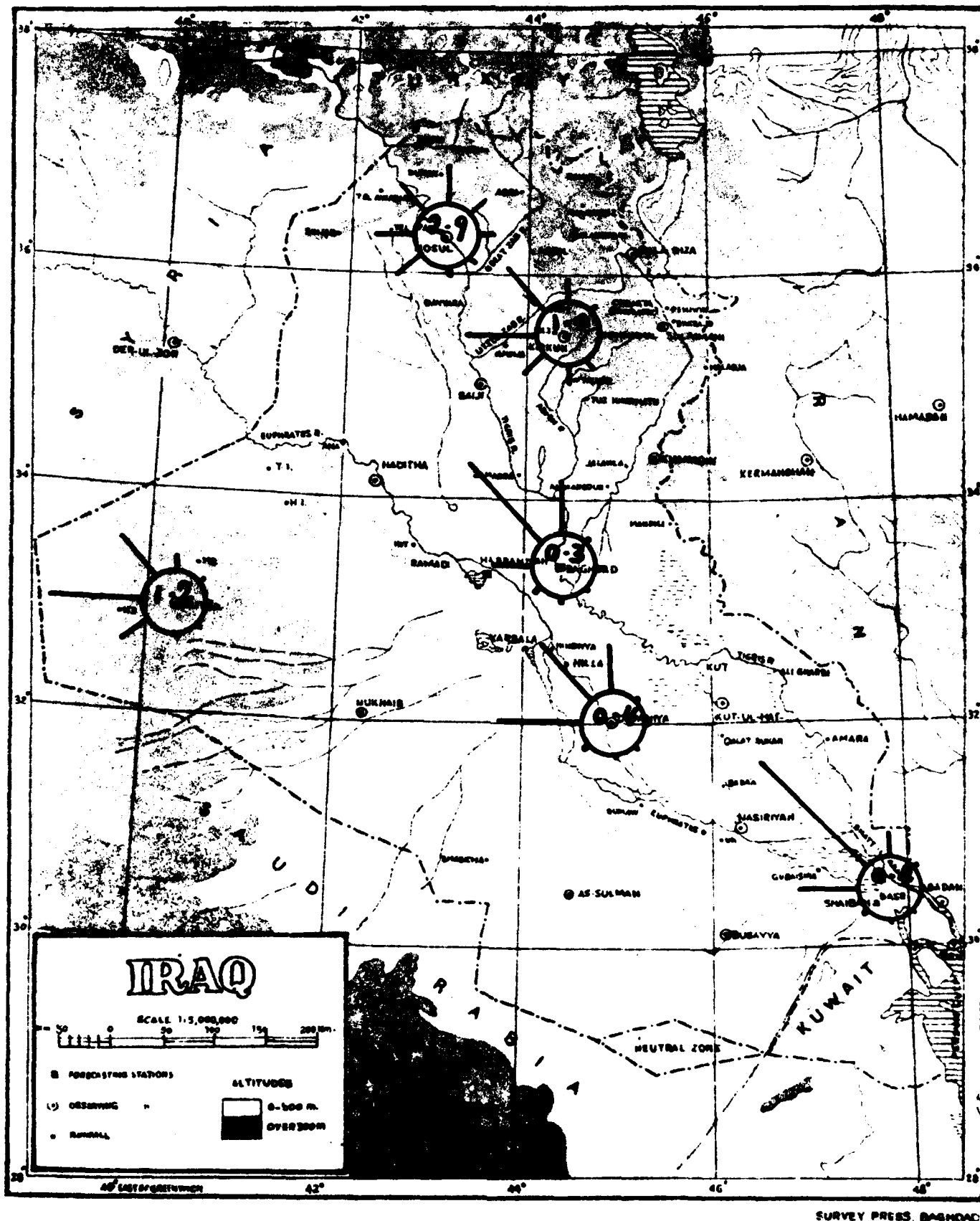
JUNE 0600 GMT.



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

193

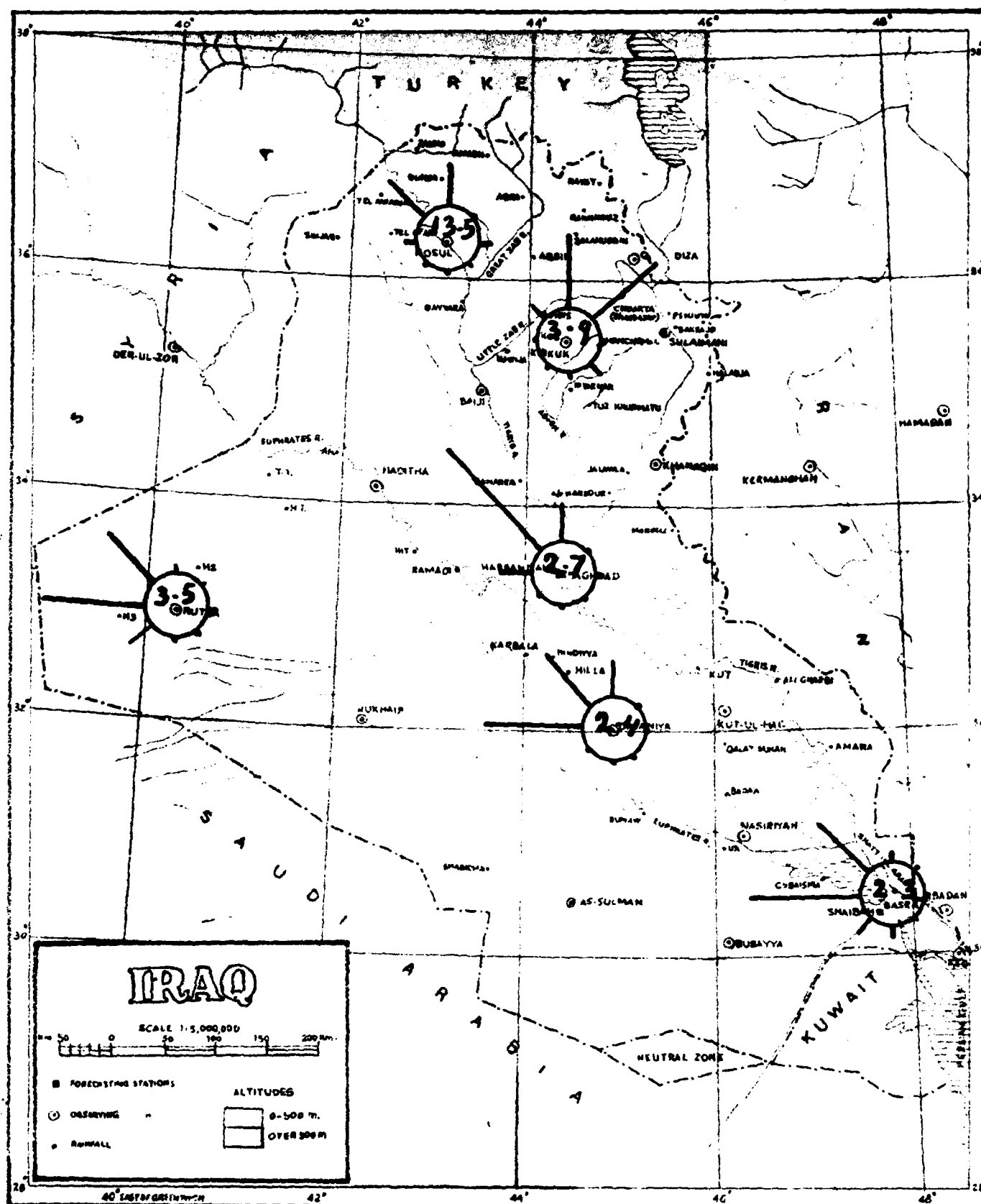
JUNE 1200 GMT



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

194

JULY 0300 GMT.



195

JULY 0600 GMT.

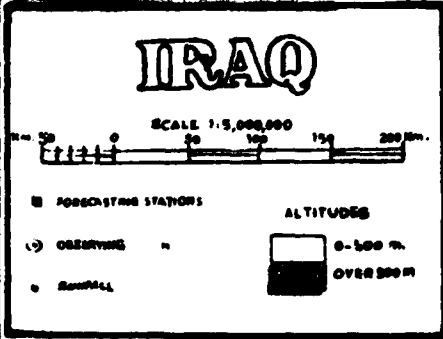


نی

196

JULY

1200 GMT.



SURVEY PAGES, BAGHDAD

IRAQ

SCALE 1:5,000,000

0 50 100 150 200 km

■ FORECASTING STATIONS
 (•) OBSERVING STATIONS
 • RAINFALL

ALTITUDES
 0-500 m.
 OVER 500 m.

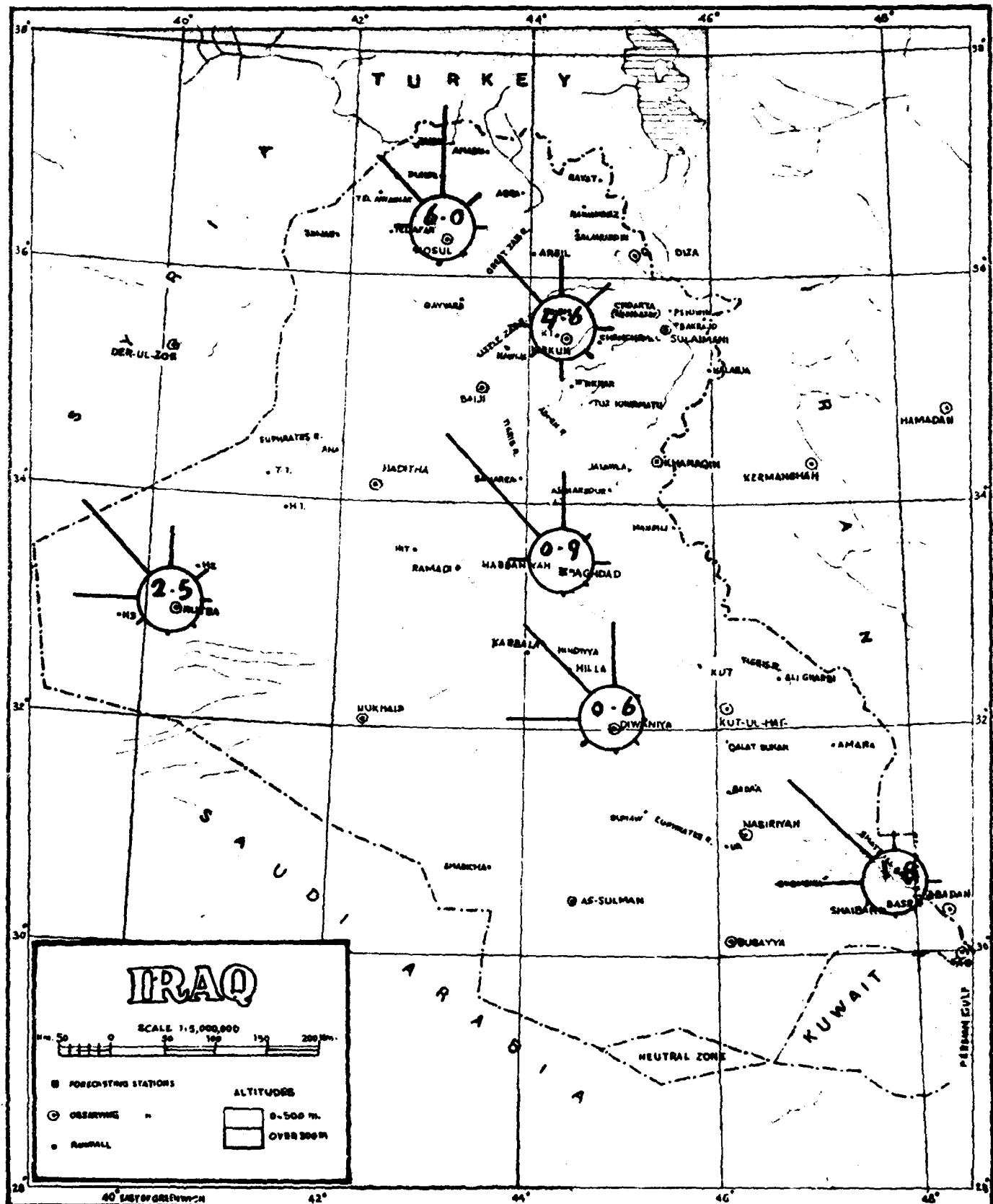
NEUTRAL ZONE
 KUWAIT

60° EAST OF GREENWICH

WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

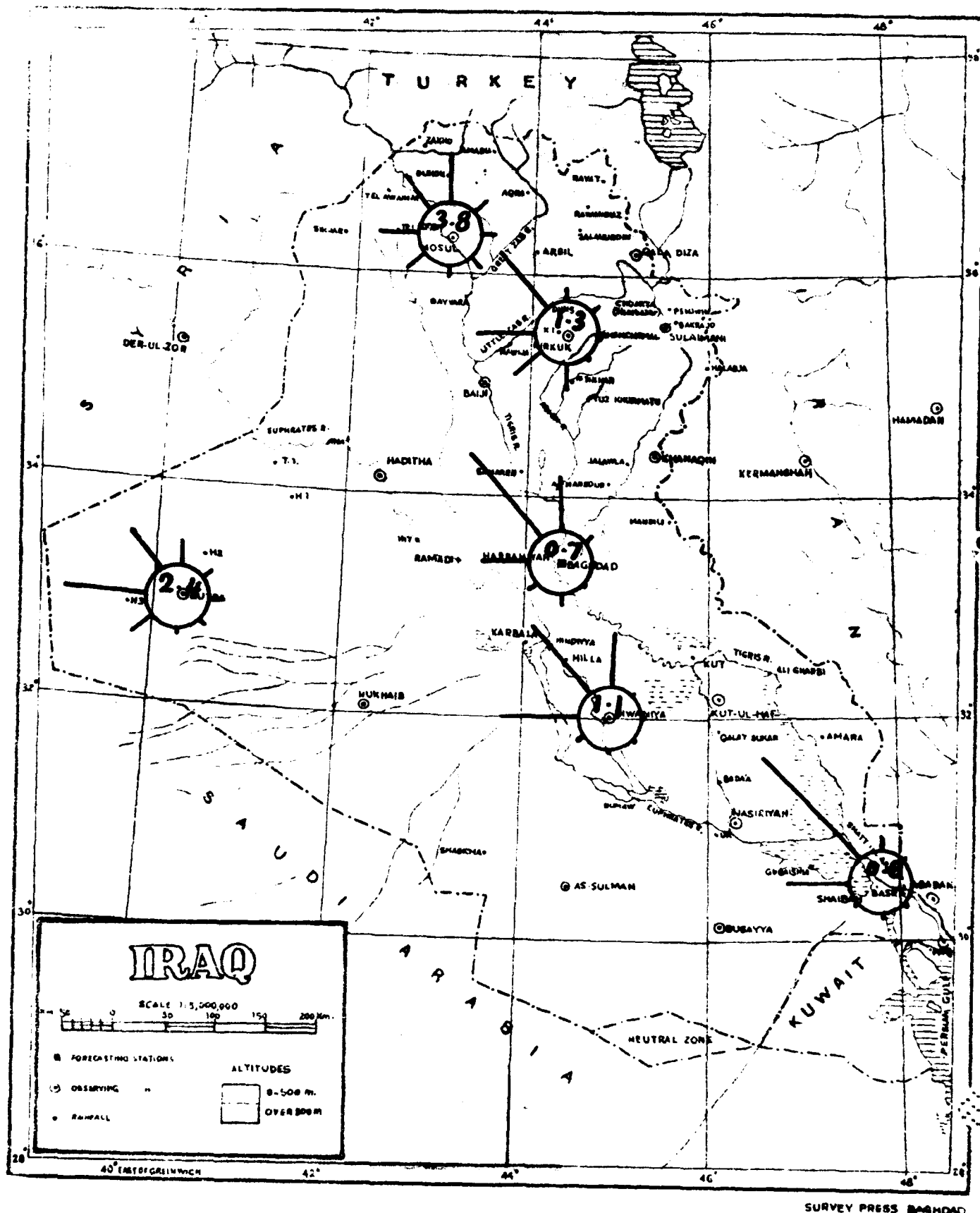
198

AUGUST 0600 GMT



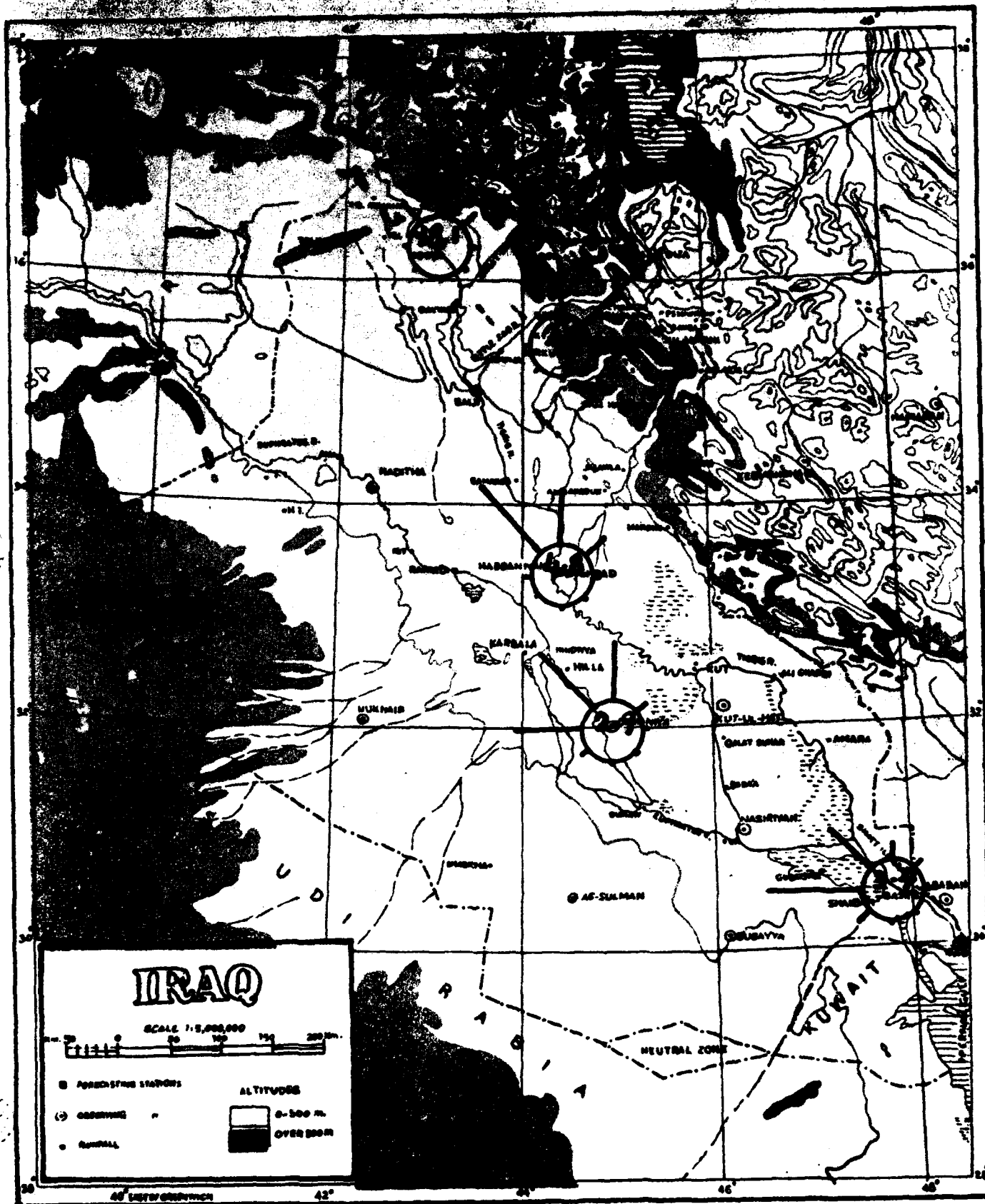
199

AUGUST 1200 GMT.



Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

SEPTEMBER 0300 GMT



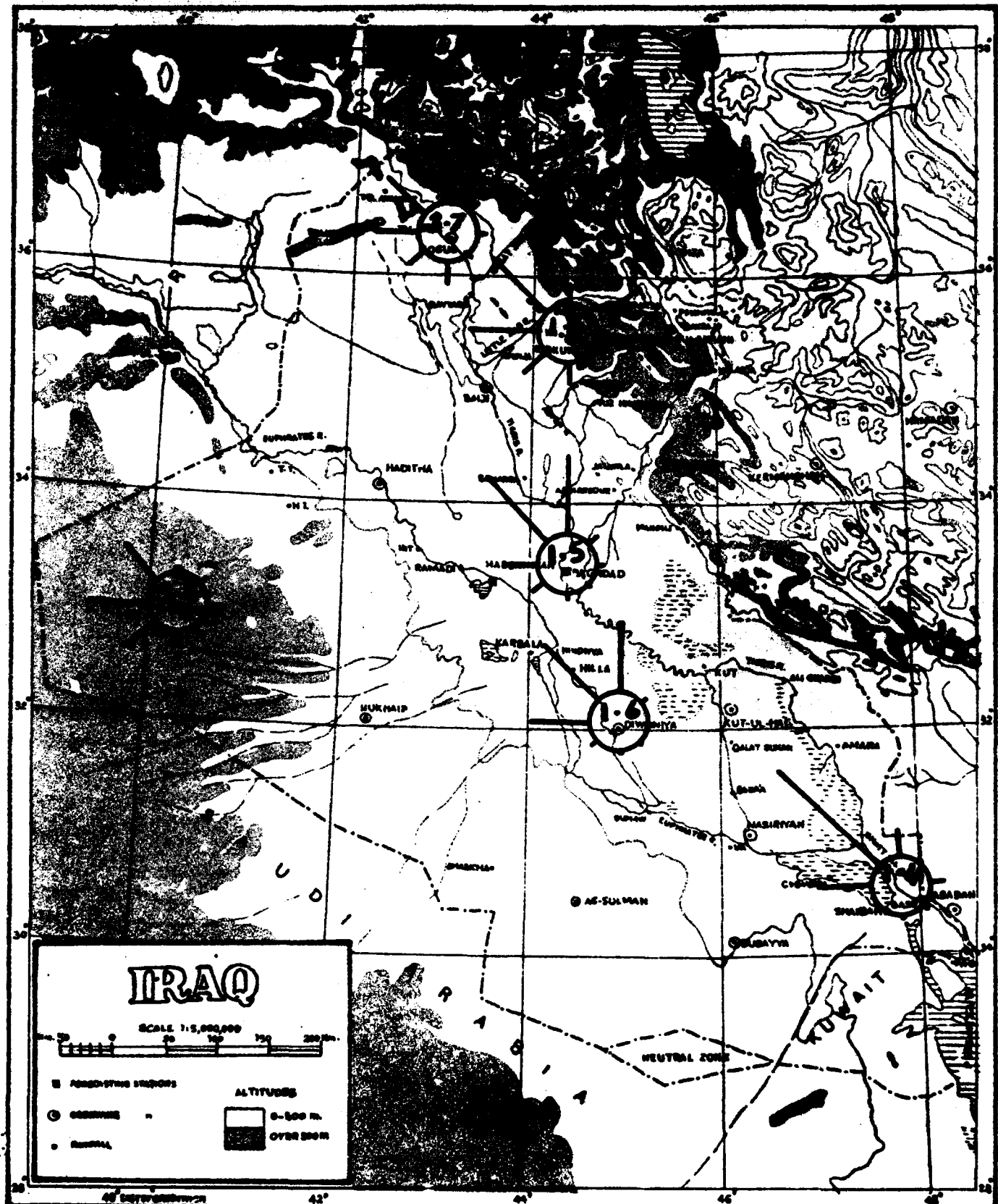
SEPTEMBER 0600 GMT.



The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the cases without wind.

W-1 N-13
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

SEPTEMBER 1200 GMT



The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the centre shows the case without wind.

SURVEY PRESS. BAGHDAD.

OCTOBER 0300 GMT

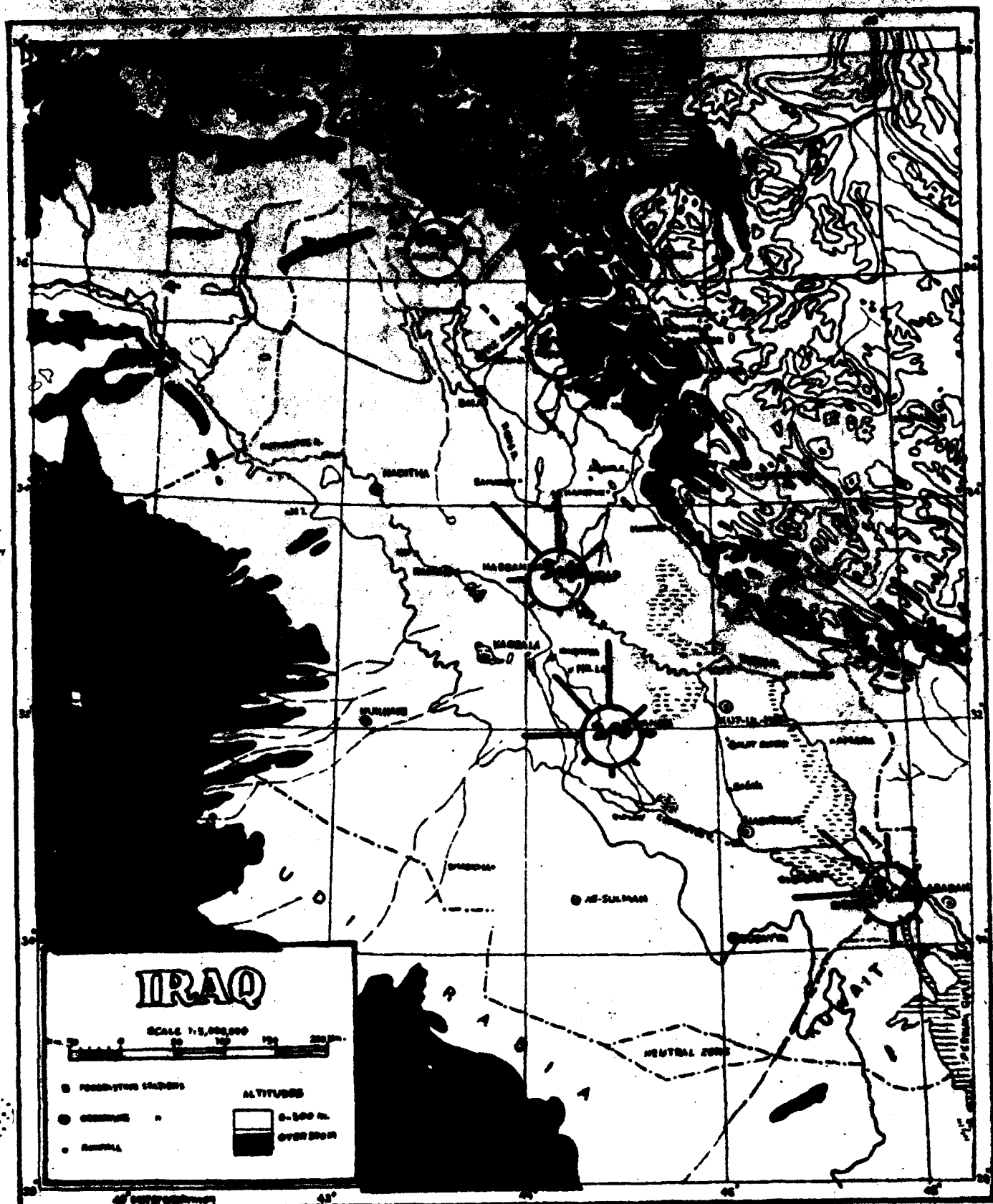


V.P.D.

204

UNITED STATES ARMY
CENTRAL INTELLIGENCE AGENCY
JOINT CHIEFS OF STAFF
JOINT MILITARY OPERATIONS CENTER

OCTOBER 1960 GMT.



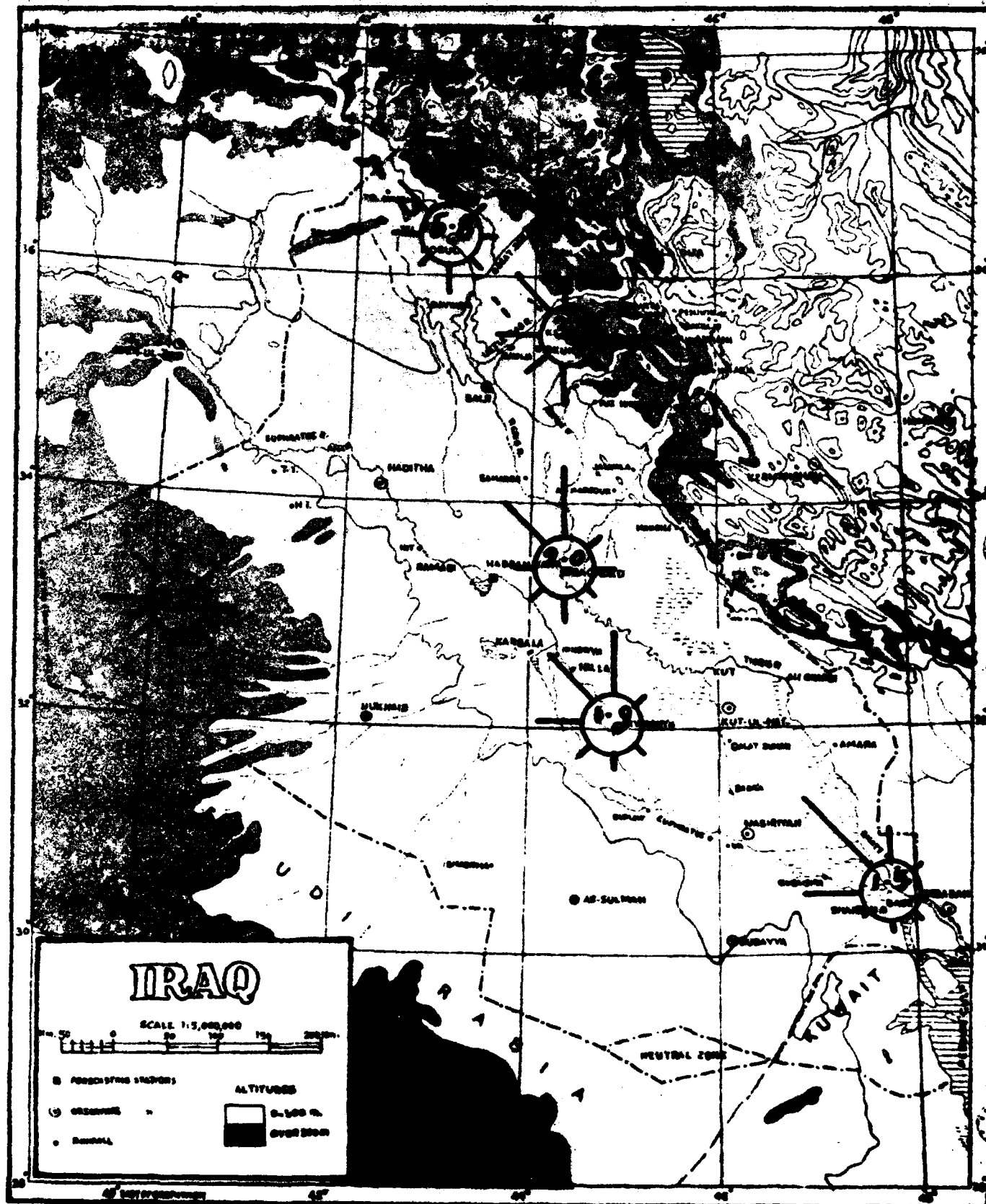
SURVEY FROM SHIRAZ

WIND

Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

285

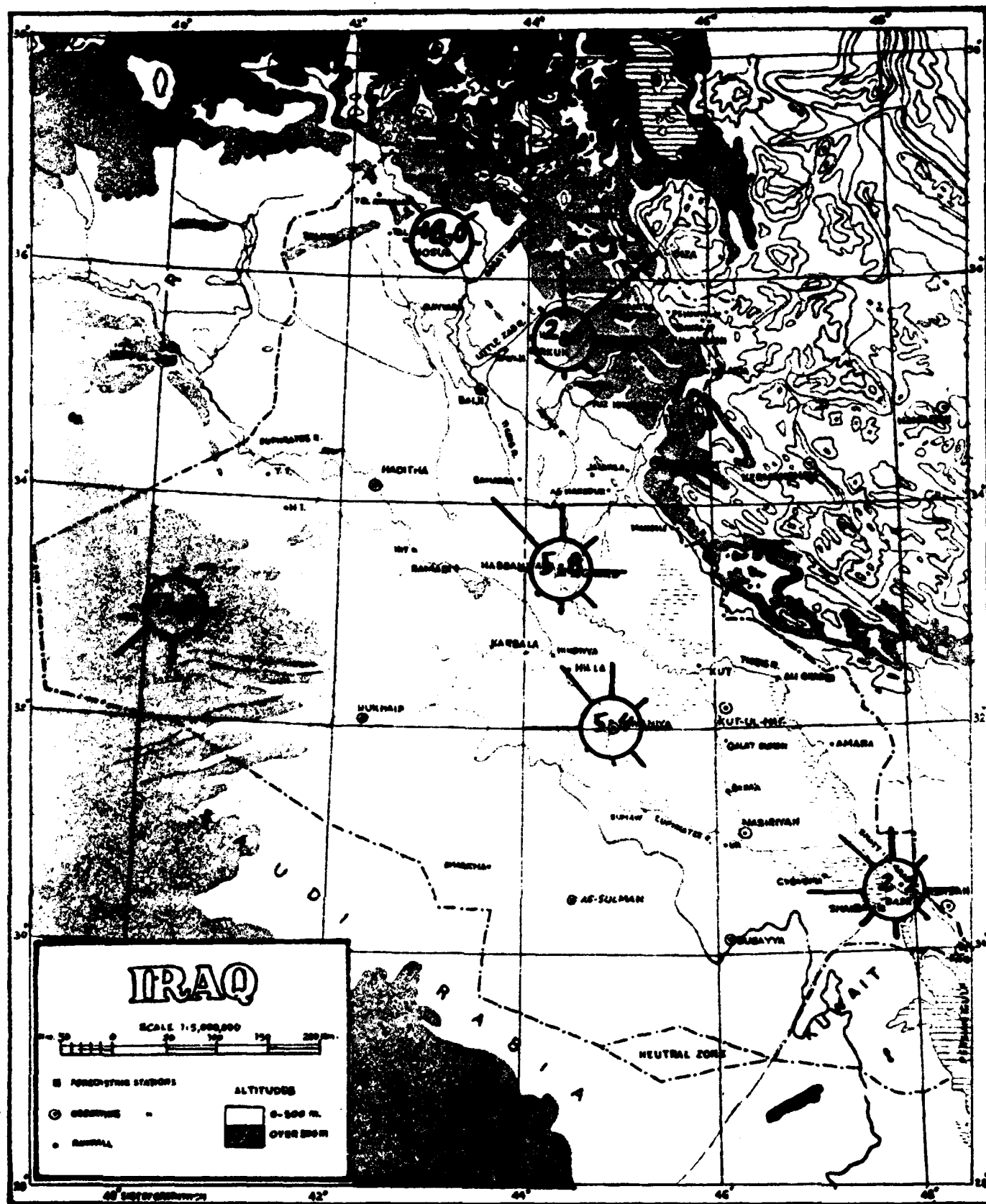
OCTOBER 1200 GMT



WIND
Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

206

NOVEMBER 0300 GMT.



207

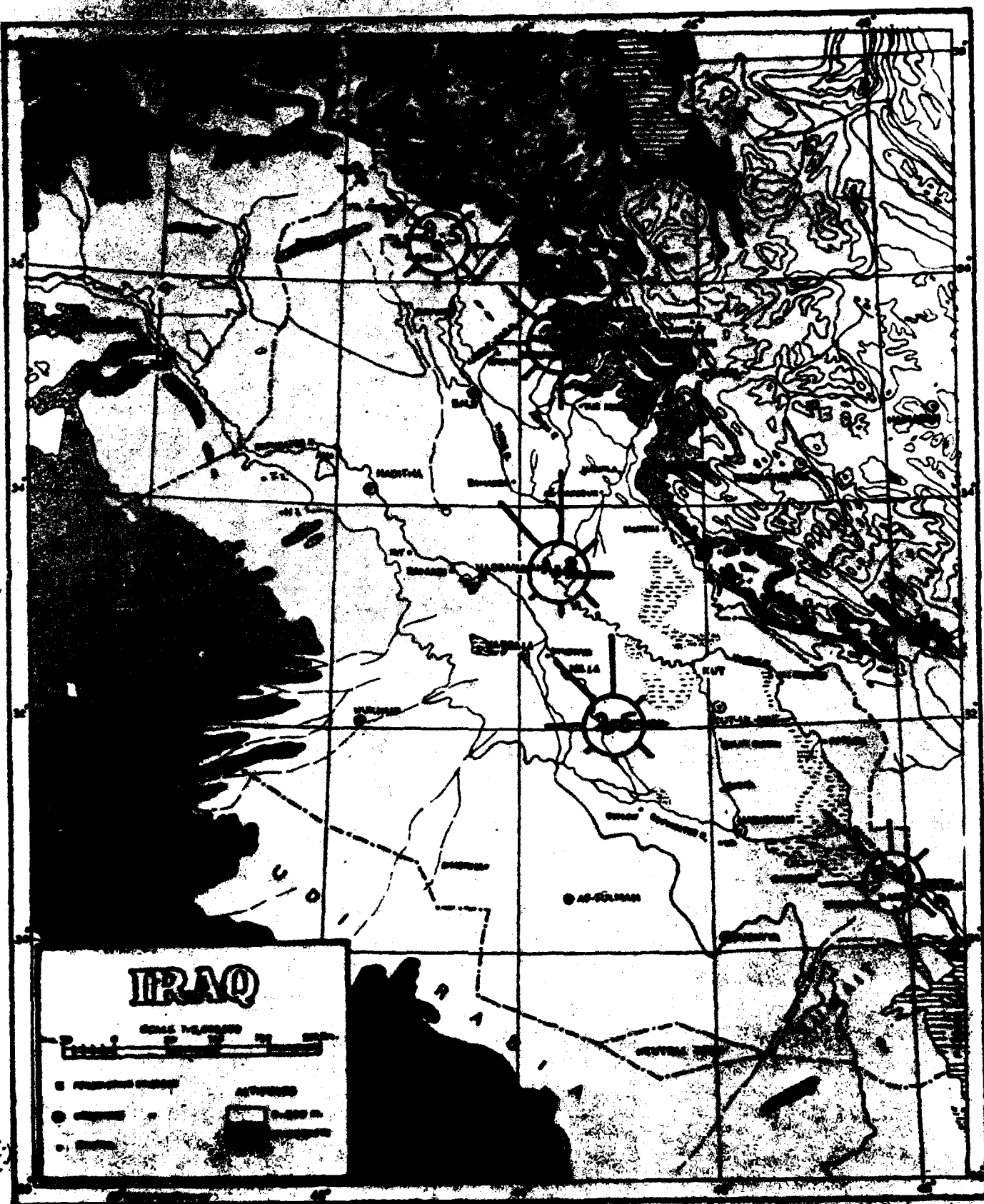


SURVEY PAGES, BACKING

W 3 N 17
Average Frequency from Specified Directions
period of records see page 2/3

288.

NOVEMBER 1200 GMT



The length of each arrow represents the mean number of occurrences of that particular wind direction. 1 case equal 1.5 mm. The number in the center shows the cases without wind.

209

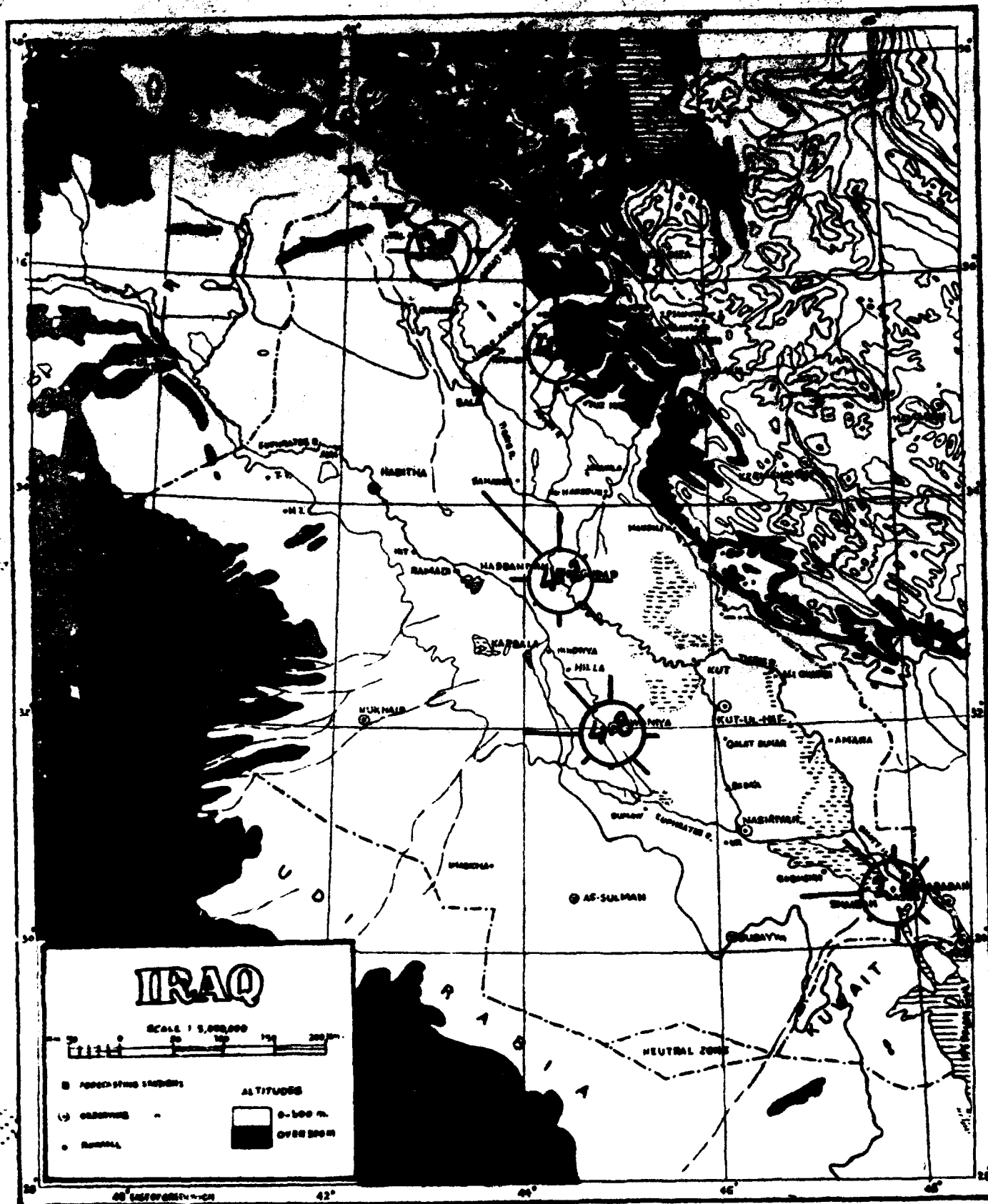
SURVEY PRESS, BAKHONG

WIND

Average Frequency from Specified Directions
for some selected stations
period of records see page 2/3

210

DECEMBER 0600 GMT.



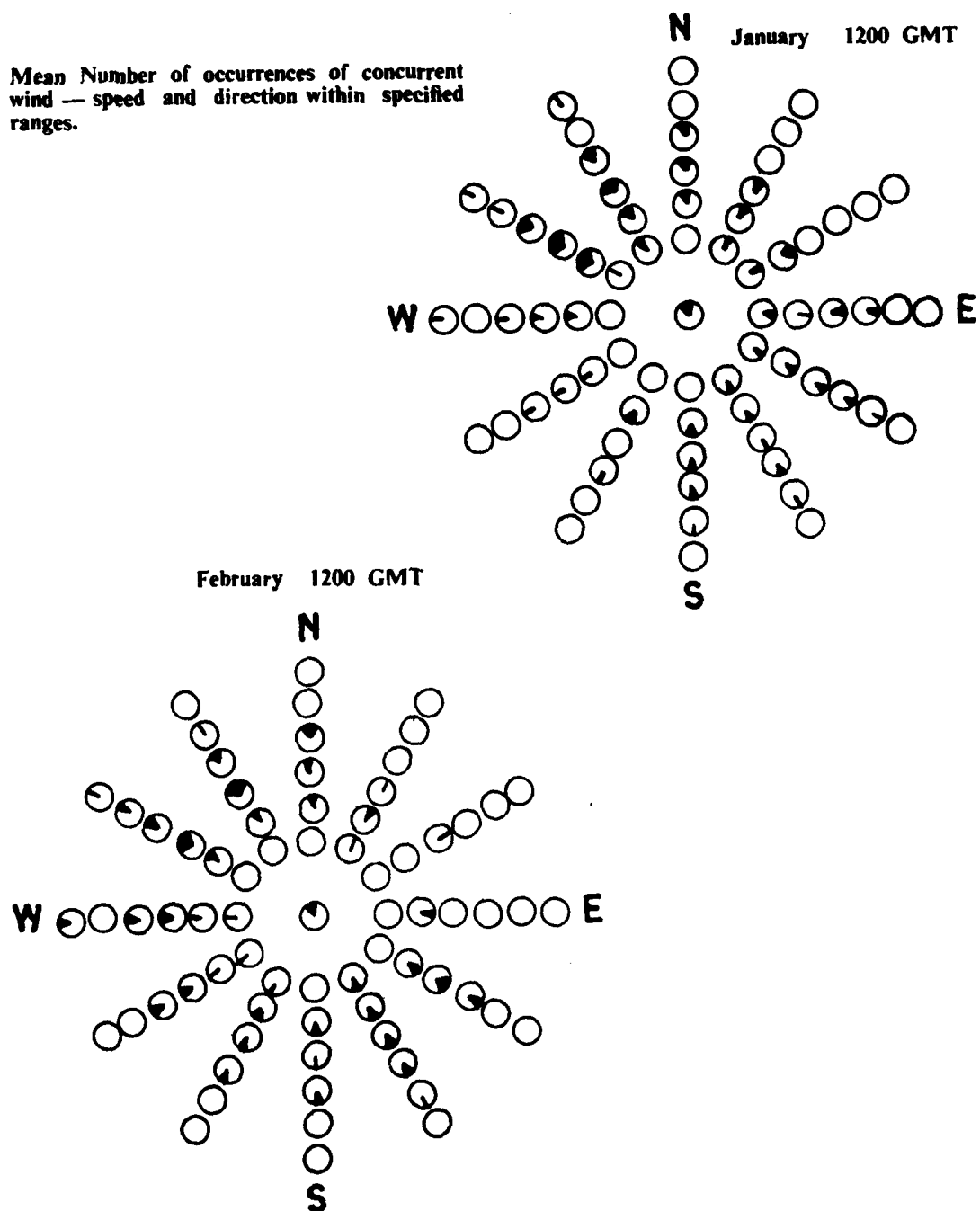
SURVEY PRESS. BASHOAR.

WIND DISTRIBUTION

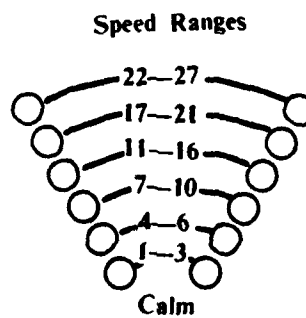
212

at Baghdad Airport 1951—1955

Mean Number of occurrences of concurrent wind — speed and direction within specified ranges.



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.



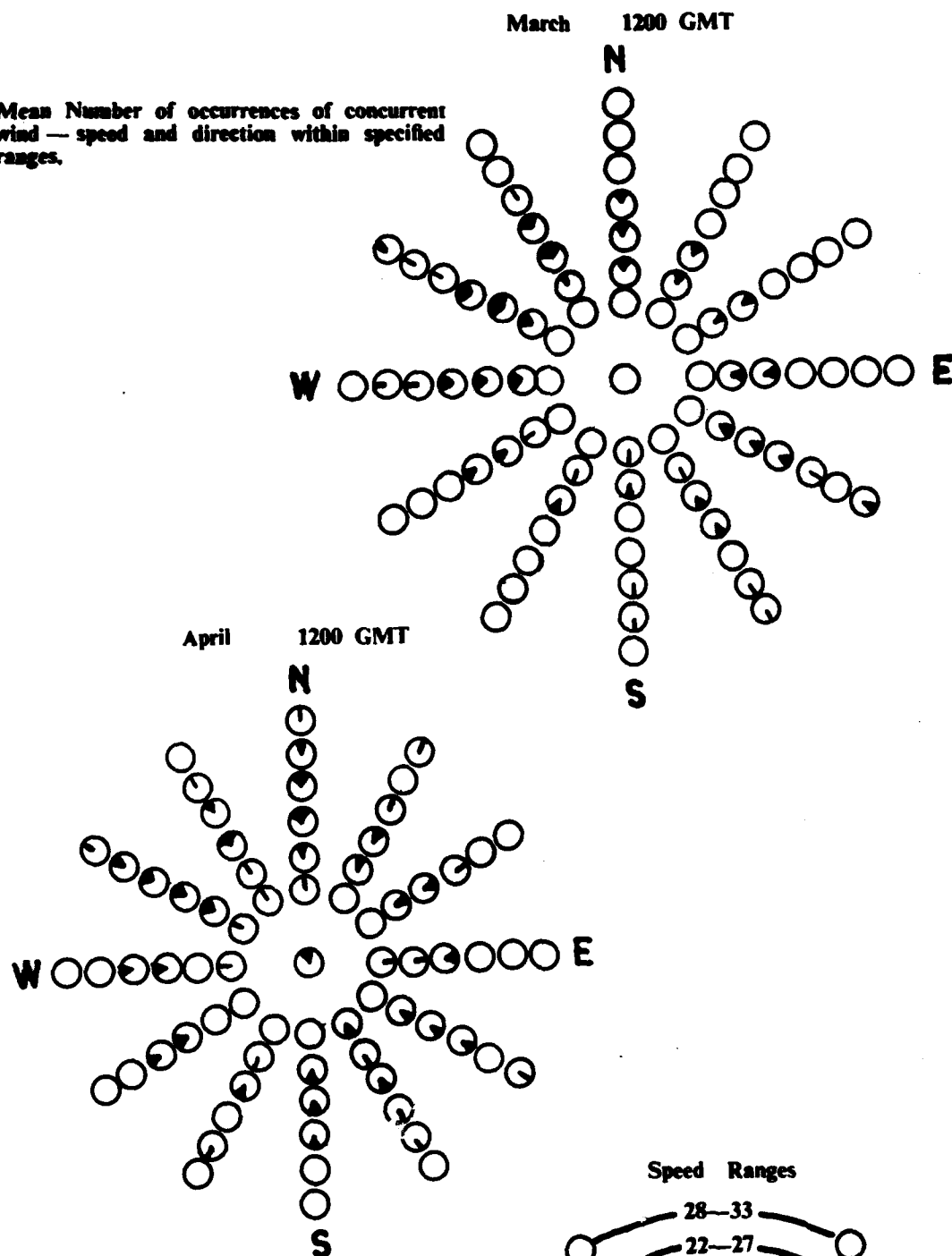
Wind Speed in Knots

WIND DISTRIBUTION

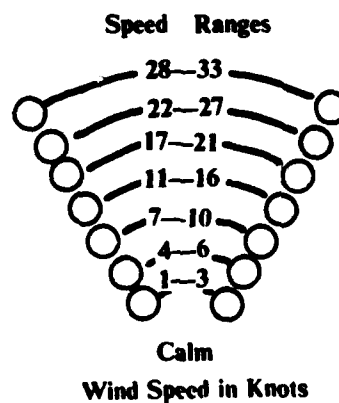
213

at Baghdad Airport 1951—1955

Mean Number of occurrences of concurrent wind — speed and direction within specified ranges.



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.

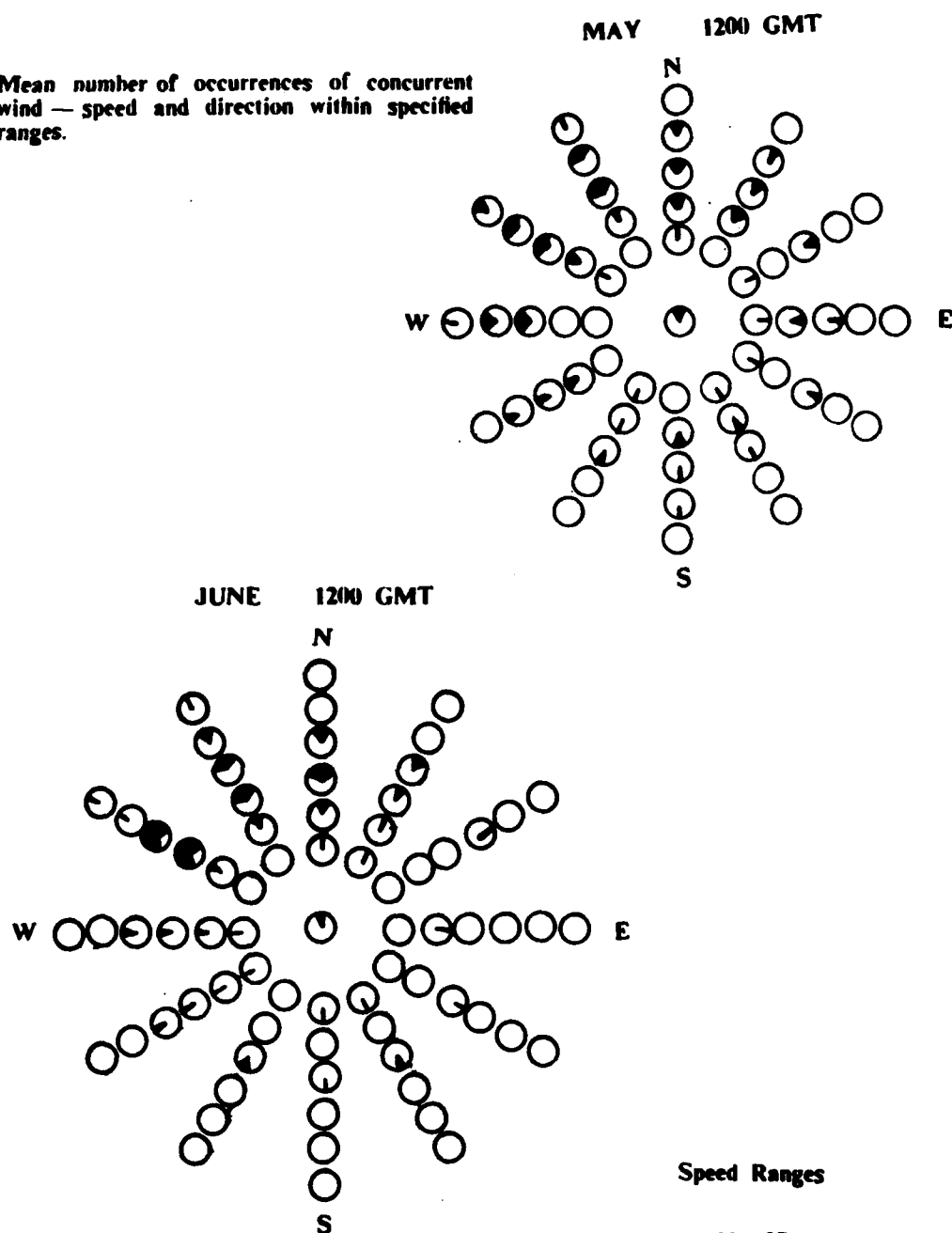


WIND DISTRIBUTION

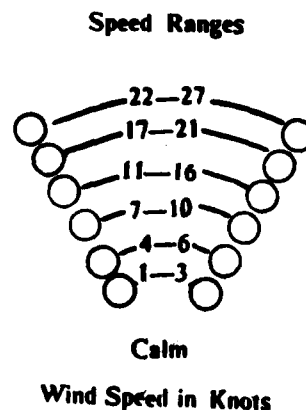
214

at Baghdad Airport 1951—1955

Mean number of occurrences of concurrent wind — speed and direction within specified ranges.



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.



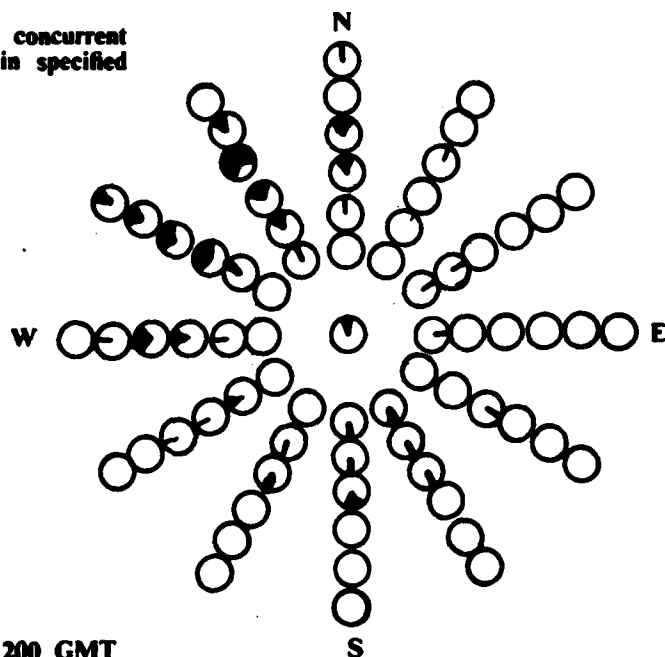
WIND DISTRIBUTION

215

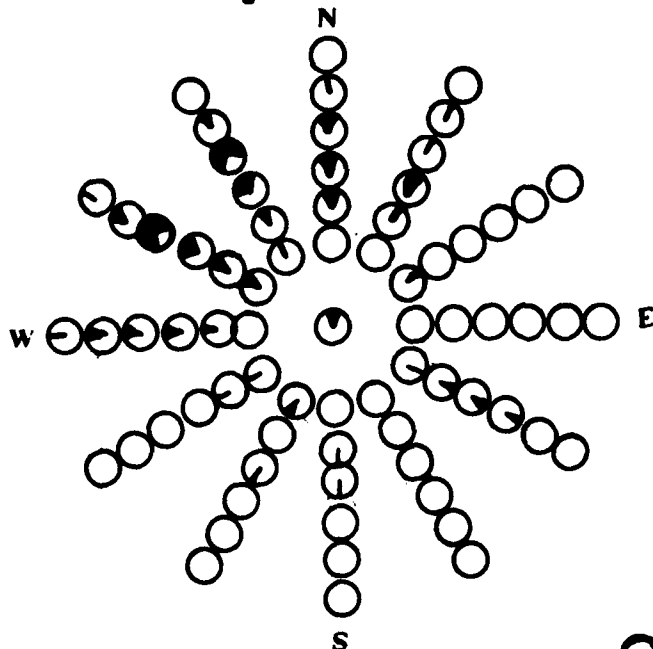
at Baghdad Airport 1951—1955

Mean number of occurrences of concurrent wind — speed and direction within specified ranges.

July 1200 GMT

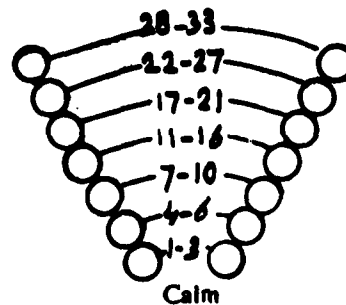


August 1200 GMT



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.

Speed Ranges



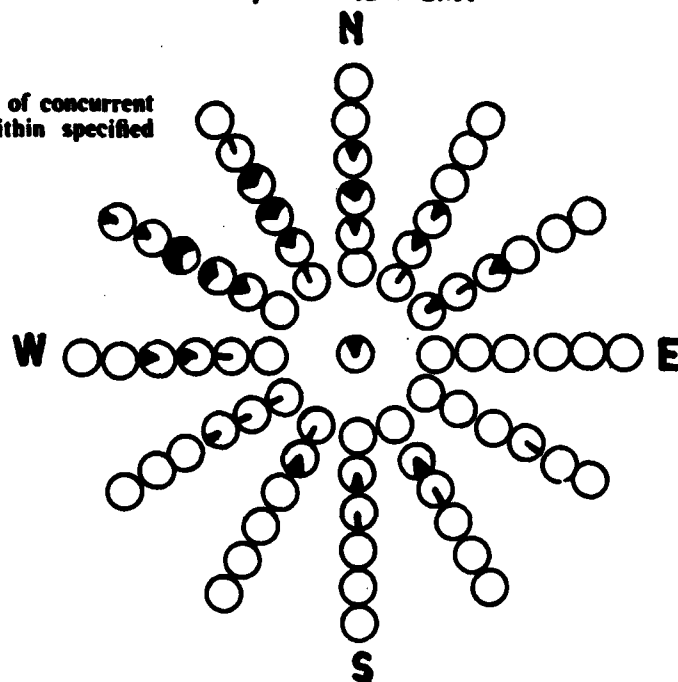
Calm

Wind Speed in Knots

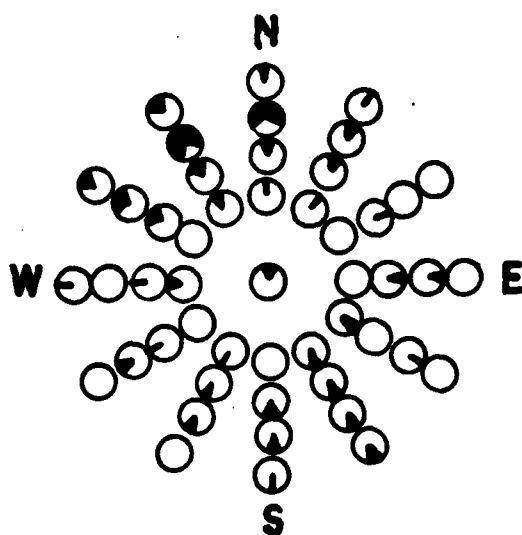
at Baghdad Airport 1951—1955

September 1200 GMT

Mean number of occurrences of concurrent wind — speed and direction within specified ranges.

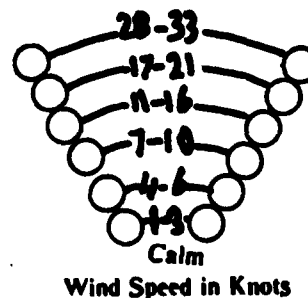


October 1200 GMT



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.

Speed Ranges



Wind Speed in Knots

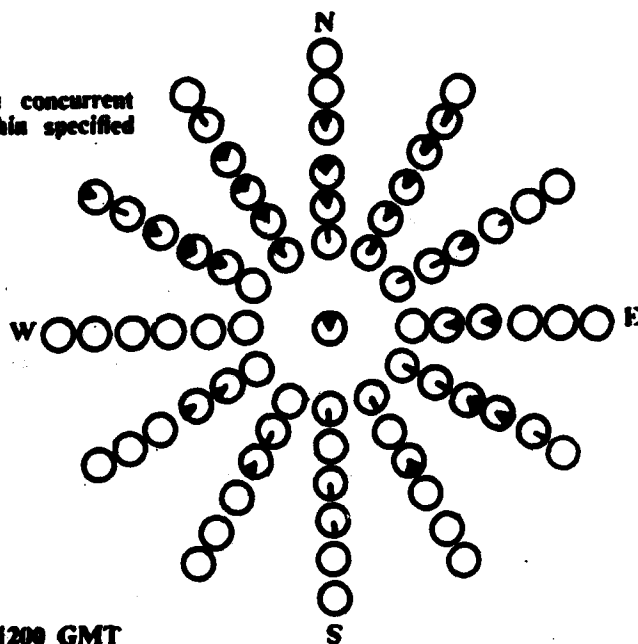
WIND DISTRIBUTION

217

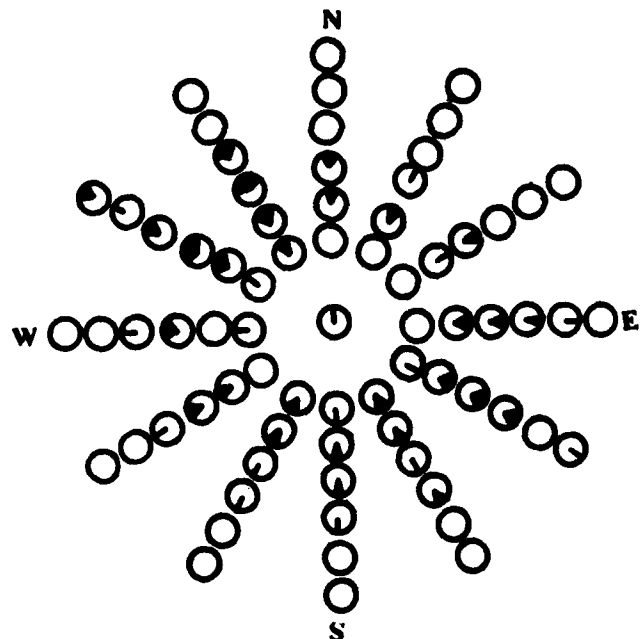
at Baghdad Airport 1951—1955

NOVEMBER 1200 GMT

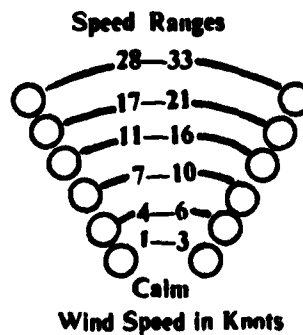
Mean number of occurrences of concurrent wind — speed and direction within specified ranges.



DECEMBER 1200 GMT



The black sectors represent the mean number of occurrences for the particular wind speed and direction interval given by the circle. A sector with an opening of 10 degrees represents a value of 0.2, a sector of 20 degrees 0.4 etc. The sectors in the centre indicate the cases without wind.



END

FILMED

11-85

DTIC